PHYSICAL PLANNING AND MANAGEMENT OF MODERN HEALTH CARE FACILITIES IN THE RURAL AREA OF ONDO STATE, NIGERIA

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Certification

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Dedication

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ABSTRACT

Studies on health care facilities, apart from being urban biased, have focused more on spatial inequality and patronage pattern to the neglect of physical planning and management. This study, therefore, evaluated the distribution pattern of the facilities, degree of conformity with planning standard and perception of their management in the rural areas of Ondo state, Nigeria. Ondo state was chosen due to its peculiar characteristics of having upland, midland and coastland areas.

A cross-sectional survey research design was adopted. A combination of the central place and environmental planning and management theories, and three delay model guided the study. A multi-stage sampling technique was adopted to select one rural Local Government Area (LGA) in each senatorial district. A total of 328 rural settlements were identified in the selected LGAs, out of which eleven with modern healthcare facilities were purposively selected. Nine hundred and ninety-eight households were chosen for the study. A structured questionnaire on socio-demographic characteristics (age, sex), physical planning variables (distance travelled, mode of travel) and management variables (community involvement in decision making) was administered to respondents. Observational checklist was used to assess physical planning standards in relation to the facilities (land area, building density, open space, bed space, road, and topography). Key-Informant Interviews (KII) and Focus Group Discussions (FGDs) complemented information on facilities' management. The KIIs were conducted with the chairmen, community development officers, directors of town planning and senior health officers in the LGAs. Four FGDs were constituted in each LGA. Secondary data on physical planning attributes (threshold population and range) were also sourced. Descriptive statistics and Nearest Neighbour Analysis were employed to determine the spatial pattern of the facilities. Qualitative data were content analysed.

The respondents' mean age was 39.1 ±12.3 years, 52.6% were males. About 90% of the respondents travelled more than the expected maximum five kilometers, and 68.0% walked to health care facilities. Management of healthcare facilities was perceived by the respondents to be inadequate in terms of supervision (57.1%), irregular meetings (54.6%) and poor community dialogue (75.5%). Challenges to healthcare facilities identified by the respondents included: finance (63.2%), non-availability of modern equipment (56.0%) and shortage of medical and paramedical staff (43.0%). Field observations revealed that none of the facilities satisfied the physical planning regulation's requirements for land area, building density, open space, and bed space, while 64.0 % and 71.4% met the requirements for road and topographical standards respectively. Variations were also observed in the level of compliance with the physical planning regulation standards among the senatorial districts: Ondo north (23.0 %) > Ondo central (16.4%) > Ondo south (12.3%). All health care facilities surveyed did not have the required threshold population needed to guarantee adequate patronage. Modern health care facilities were clustered (Rn < 1). Top-down planning and management approach to health care facilities was observed.

Modern health care facilities in the rural areas of Ondo state were poorly distributed. Enforcement of compliance to planning and management standards is recommended.

Keywords: Modern Health care facilities, Physical planning standard, Rural Community
Words count: 487

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THE LIST OF ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
BA	Bachelor of Art
B.C	Before Christ
BSC	Bachelor of Science
DHSP	Demographic Health Survey Programme
FGN	Federal Government of Nigeria
FMOH	Federal Ministry of Health
FRN	Federal Radio Nigeria
HIV	Higher Immunodeficiency Virus
HKPITA	Hong Kong Planning Standard information and Technical Administration
HM	Health Management
HMGN	His Majestory's Government of Nigeria
HND	Higher National Diploma
HP	Health System Programme
INEC	Independent National Electoral commission
KJV	King James Version
KSPA	Kenya Service Provisional Assessment Survey
M&E	Monitoring and Evaluation
NCE	National Certificate of Education
NDDC	Niger delta development commission
NGO	Non Governmental Organisation
NPHCDA	National Primary Health Care Development Agency
PHC	Primary Health Care
PHCN	Power Holding Company Nigeria
PHD	Doctor of Philosophy

REPOA	Research on Poverty Alleviation
SPSS	Statistical Package for the Social Sciences
UNCHS	United Nation Centre for Human Settlement
UNICEF	United Nations Children's Fund
USAID	United State Agencies for International Development
WHO	World Health Organization

OPERATIVE DEFINITIONS OF KEY TERMS

Planning – the art and science of ordering the use of land and the character and sitting of buildings and communication routes so as to secure maximum practicable degree of economy, convenience and beauty.(Kebble,1969).

Management - the effective delivery of service can be defined as an approach that recognizes the diverse stakeholders which exist in a country or in an area and accepts them as the inalienable partners who must be heard and whose efforts must be made to constitute the engine which should drive the development of an area (Onibokun, 2006).

Modern health care – A system in which medical doctors and other health care professionals (such as nurses and therapists) treat symptoms and diseases using drugs, radiation, or surgery. It is also called allopathic convectional medicine and western medicine. (Kids Encarta)

Health care facilities - refer to a wide range of types, from small and relatively simple medical clinic to large, complex, and costly, teaching and research hospitals.

Health service delivery - It is the way inputs are combined to allow the delivery of a series of interventions or health actions (WHO, 1998).

Rural areas- A number of definitions has emerged in the recent time on the issue of health care facilities with regards to rural area such as occupation, population and the level of infrastructure to determine a place is rural or urban. In Nigeria and in particular this study, a settlement with less than 2000 people and characterized by an agricultural economy is called a rural settlement and its area termed rural area (Olujimi, 2000)

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Health infrastructure refers to the physical structure and supporting equipment established for the provision of health services. It usually involves a structure with facilities for different health service needs, equipment such as cold-chains facilities for storage, management and use in the provision of health services to the population. Over time, concerns have been expressed about the disappointing growth performance of poor countries; and, among the many causal factors that economists have proposed, poor health has stood out as an important issue (Howitt, 2005).

In the context of global health condition, Wallace (2004) stated that most low-income countries were unlikely to achieve the Millennium Development Goals (MDGs) for health by the target year, 2015, with the current policies, institutions, and many other factors. David and Shelty (2003) emphasised: first, the decline in infant and maternal mortality required to meet the target is especially steep; second, improving health or outcomes are linked not only to the interventions outside the health sector; and third, delivering health services, effectively, require the coordination of policies across a number of fields. These required fields of policy coordination include public sector management policies that provide adequate incentives to health care providers, public health measures to protect the population, and suitable regulations and quality control of private providers, who often deliver more health services than public providers (Abayomi et al., 2008).

Health care provision in Nigeria is a concurrent responsibility of the three tiers of government in the country. However, private providers of health care have a prominent role to play in health care delivery because Nigeria operates a mixed economy. The federal government's role is mostly limited to coordinating the affairs of the federal university teaching hospitals, the state governments manage the many general hospitals, and the local governments take care of the primary health centres. Moreover, various attempts have been made by the Nigerian government to develop a planning and management strategy for health services. For instance, the Nigerian Third National

Development Plan (1975-1980) emphasised the need for more medical training facilities and established the Basic Health Services Scheme (BHSS) to correct the imbalance in the distribution of health resources (Federal Republic of Nigeria, 1975). The Fourth National Development Plan (1980-85), categorically, underscored the necessity to ensure a more equitable distribution of health facilities and manpower throughout the country. As noted by Health Plan (1981), the policy thrust was the effective establishment and implementation of a comprehensive health service scheme through the BHSS, supported by various existing hospital programs.

Within the three tiers of government, primary health care serves as the entry point for individuals into the health care delivery system. This level of primary health care consists of health clinics, mobile health clinics, and primary comprehensive health centres, as well as health posts. The secondary health care is made up of general hospitals. The tertiary health care comprises specialists' services in both the state specialist hospitals and the university teaching hospitals. Regarding the three-tier health care structure, the main target is to increase the overall percentage of Nigerians who have a close access to health facilities.

In order to achieve the MDG for Nigeria in 2004, a massive but well-articulated health sector reform program was established. The program gave birth to the National Economic Empowerment Development Strategy (NEEDS). NEEDS was decentralized: its particular attention on rural community health care was the responsibility of the State Economic Empowerment Development Strategy (SEEDS); and through the Local Economic Empowerment Development Strategy (LEEDS), the establishment of more health facilities across rural regions of the country was promoted. Ondo State is a beneficiary in this area. In particular, the Ondo State government made efforts to ensure a more equitable distribution of health resources in the state. Unfortunately, there were yet glaring disparities in its health care delivery, owing to lack of adequate planning and management. The deterioration in government facilities has resulted in a mass exodus of health professionals. Worsening the mass exodus were also the low salaries and poor working conditions. In the Punch (2010), the Nigerian Medical Association (NMA) asserted that the few available facilities were unevenly distributed, with most concentration in the urban areas. The association further added that in rural communities

of Ondo State where many residents found it difficult to access qualitative health care services. This situation had engendered a marked growth in the private sector health care services; and there was a decline in government attempts to strengthen primary health care. In fact, according to NMA, thousands of people were dying prematurely from diseases that were preventable or curable. At relatively little expenses, these people could have lived longer, healthier and had more productive lives (Dara 2004). For instance, Nigeria's 2006 Millennium Development Goals Report (FGN, 2007) indicates that, in Nigeria, the under-five mortality rate marginally improved from 201/1000 live births in 2003 to 197/1000 live births in 2004. This, no doubt, is far above the 49 per 1000, or less, target of the Millennium Development Goal set for 2015.

Meanwhile, no health care delivery can function efficiently without adequate planning and management of health care facilities. To provide adequate health infrastructure quality information on location of services, the capacity of facilities and catchments population is a major requirement. Although a country's population requires health infrastructure and health care services within a given proximity, because resources constraints prioritization is indispensable; planning and management of health facilities entails several factors, really, but most important are needs and gaps. Health Management Survey (2005) submitted that effective planning and management would improve equity, efficiency, effectiveness and responsiveness of any health care system, particularly the primary health care. According to Richard (2000), various observers had pointed out the transformation that had taken place in health planning over the past several years. The form of planning that has emerged as a component of health care in both the public and private sectors is a far cry from the comprehensive planning approach pursued during the 1960s and 1970s. Thus, the health care environment has changed dramatically and mandated a new approach of planning and management for both government health agencies and private sector providers. So, the health care service planner must be able to establish criteria that provide a basis for making these distinctions (Ronald, 2000). According to Health Plan (2000), these criteria should be linked to the strategic planning and management of the health care facilities, and the planner is in the best position to convert strategic initiatives into meaningful criteria for use by the decision-maker. The

health care facilities that had been provided by public and private agencies need to be properly managed.

Considering the contribution of the rural dwellers to the overall economy of Ondo State, in terms of cheap labour and production of raw (agricultural) materials for both local and bigger industries, to what extent did the rural-focused health care delivery programme benefit the dwellers? Against the background of this pivotal question, this study seeks to analyse the effect of planning and management of orthodox health care facilities in the rural areas of Ondo State, and determine the quality of health of the citizens, accepting that the provision of health facilities forms an intrinsic part of national development strategies in Nigeria, in particular.

1.2 Statement of the Problem

Health facility planning systems in Nigeria are increasingly failing at ensuring health care provision for the growing population that is disproportionately spatially distributed. One of the problems with the Nigerian planning system today is its top-to-bottom approach often adopted. The communities hardly get involved in plans concerning the provision of health facilities; the decision is handled by the top hierarchy of government. Therefore, the health facilities provided do not actually respond to the people's particular needs. Despite the ever-increasing budget allocation to facility and service provisions in the country, Nigeria, there has not been a commensurate reduction in major ailments. Data on mortality and morbidity have kept on oscillating. The federal, state and local governments, in addition to the financial assistance provided by the international donor agencies, have continued to invest heavily on facility provision. Funding for the National Program on Immunization (NPI), for instance, went from 9 million naira in 1998 to close to 7.5 billion naira in 2001 (Monical et al., 2004).

In the light of this, in Ondo State there was a tremendous increase in the provision of health care facilities: health clinics increased from 0 to 11 at Ose Local Government Area (LGA), from 2 to 12 in Akure North LGA, and from 15 to 29 in Ilaje LGA between 2004 and 2005 (Ministry of Finance and Planning, Ondo State, 2006). Unfortunately, the indeed remarkable development had little or marginal outcome on health indices among the population. The growing population in the urban centres and rural communities of the

State implied that budgetary allocation for social services and facilities must be on the increase if people were to be adequately served. However, the scattered nature of rural communities, coupled with inadequate physical, psychological and economic access, made many communities to be marginalised in the health service provision. The required threshold population needed for the services and facilities location was often unobtainable in Ondo State. Moreover, politicians in Ondo State often allocated the health service provision without due consideration for planning ethics and the greater ratio of population to the fewer facilities (Glason, 1978). Expectedly, underutilization of some health facilities was the outcome. Some facilities were left completely unused, yet, they were fitted into the needs of the people.

Reduction in Ondo State government allocation to health service and facility provisions also affected the services provided for the people. The reduction meant that fewer facilities were provided while the population kept increasing – a population which in 1991 was 2,249,548 and projected to 3,349, 377 in 2005. Consequently, an undue pressure bore down on the existing health facilities, as well as services, resulting in their breakdown, and in some cases, total collapse. Still, in other cases, the quality of service provision reduced drastically, leading to a situation where people sought alternative means of health care services.

To address some of the above-stated challenges facing health care delivery in Ondo State, it was posited that effective planning and management of existing and new facilities would help in overcoming the various challenges. Planning, according to REPOA (2005), was all about scheduling activities in terms of sequencing events towards achieving a particular goal. On the other hand, management can be defined as the process of implementing activities to enable an organization accomplish its goal and objectives by employing human and material resources for the purpose (Badembrorst 1998).

Existing body of literature reveals that extensive studies have been carried out on the rural household health facility provision with a sharp neglect of a vital aspect of planning and management of the health facilities, in Ondo State. While previous studies on health care delivery focused on spatial inequalities in the health service distribution (Iyun, 1989), bactariology and itiology (RDMS, 1996), patronage pattern (Olujimi, 2003), there is a paucity of research on the planning and management of health care

delivery in the State. With these two factors, they could significantly provide clues on the generally perceived ineffective health care delivery, especially in the rural communities of the state. This is a major gap the present study intends to fill.

To this end, this work examines the existing health care facilities on Ondo State in terms of how well they conform to the existing planning guidelines. At the same time, it identifies management challenges confronting the existing health facilities and services. In addition, the study assesses the people's participation in their state and local health care facility planning and provisions.

1.3 Aim and objectives

The aim of this study is to analyse the effect of the planning and management of modern health care facilities in terms of their conformity to the existing guidelines, with a view to identifying the implications of this on health service delivery to the rural dwellers in Ondo State.

The objectives of the study are to:

(i) generate a detailed profile of the orthodox health care facilities in the study area;

(ii) investigate the diverse planning and management strategies for health care facilities delivery, and their challenges and opportunities in Ondo state;

(iii) analyse the pattern of distribution and the degree of conformity of existing orthodox health care facilities in the rural areas of Ondo state to planning guidelines;

(iv) assess peoples' perception of the effect of the planning and management of health care service delivery on the people in the rural area of the State; and

(v) recommend effective measures to enhance the planning and management of health care facilities in the rural area of Ondo State.

1.4 Hypothesis formulation

For the purpose of this study, four hypotheses were formulated, namely:

(1) the ownership of health facility does not affect its functionality;

(2) there is no significant relationship between the health facility type and the health status of the people;

(3) the proximity of health facility does not influence patronage;

(4) health service delivery is not the function of planning and management; and

(5) health care facility is not randomly distributed in the study area.

1.5.0 The setting of the study

Ondo State of Nigeria was one of the seven states created on 3rd February, 1976 by the Federal Military Government of Nigeria. It was carved out of the old Western State. The State covers the total area of the former Ondo province, created in 1915 with Akure as the provincial headquarters. Ondo State took off formally on April, 1976, consisting of the nine administrative divisions of the former Western State (Ministry of Information and Culture, 1979). However, on 1st October, 1996, Ekiti State, comprising Ekiti Central, Ekiti South and Ekiti West Divisions, was carved out of Ondo State. Hence, the present Ondo State is made up of Akoko, Akure, Okiti pupa, Ondo and Owo Divisions. Akure remains the State capital.

1.5.1 Location and Geography

Ondo State lies between latitude $5^{o}45^{1}$ and $7^{o}52^{1}$N and longitudes $4^{o}20^{1}$ and $6^{o}5^{1}$E. Its land area is about 15,500 square kilometers. Edo and Delta States bound Ondo State on the East, on the West by Ogun and Osun States, on the North by Ekiti and Kogi State and to the South by the Bight of Benin and the Atlantic Ocean.

The State has two main vegetation belts; the rain forest has evergreen trees and thick undergrowth, which extends from the South Coast to about 50km inland (the riverine area of Ondo State), and the deciduous forest, which is characterised by tall trees and thin undergrowth. There are equally two seasons: the raining season: April – October, and the dry season: November – March. Ondo State experiences heavy rainfall during the raining season and high temperature throughout the year – between 25^{o} and 33^{o} Celsius (See fig.1).

1.5.2 Justification for the study

In this study, the focused study area was the rural areas of Ondo State, since they constituted the vulnerable group. It is imperative, therefore, to know and understand the

existing rural setting of Ondo State and find a way of addressing the problems peculiar to them. The rural areas in Ondo State are characterised by poverty despite the available vast agricultural resources there which could serve as a development catalyst in the communities. The impoverished population largely comprised women, children and the elderly. According to the Ondo State Ministry of Information and Culture (2007), the population of more than 55% in the rural areas of Ondo State lived below poverty level. There was a direct relationship between poverty, household size, and health. In specific, the larger the household size, the poorer the household was likely to be. This condition of poverty was aggravated due to the poor attention given to the health sector in the state.

Going back to history, in 1979, when the civilian government took over, the number of health facilities was increased – hospitals rose from 18 to 26 in number, maternity centres from 127 to 164, and dispensaries from 153 to 173. By 1985, there were additional 30 comprehensive health centres, as against 2 in 1979.

However, a result of the location quotient analysis indicated increasing disparities in the distribution of both hospitals and lower level health facilities. Apparently, though relative to their population, some LGAs have an excess share of the health facilities while some have shortfall. Spatial inequality in the distribution of health facilities, particularly reflected in the provision of hospital beds, nurses and doctors, despite a substantial increase in manpower resources in the state. In spite of the effort by the state government to ensure a more equitable distribution of health resources, there were, nonetheless, glaring disparities. The deterioration in the provided health facilities resulted in the mass exodus of health professionals, combined with their low salaries and poor conditions of work. At the same time, the private sector intervention in the State's health care delivery, markedly, grew as the government's attempts at revamping the primary health care declined, owing to poor planning and management (Ademola, 1994).

The whole of the State would have been ideal for the study but reduced to three local government segregated across the three senatorial districts for easy generalization and inferences; and also to be able to have a fair representation of the entire state in terms of facilities coverage.

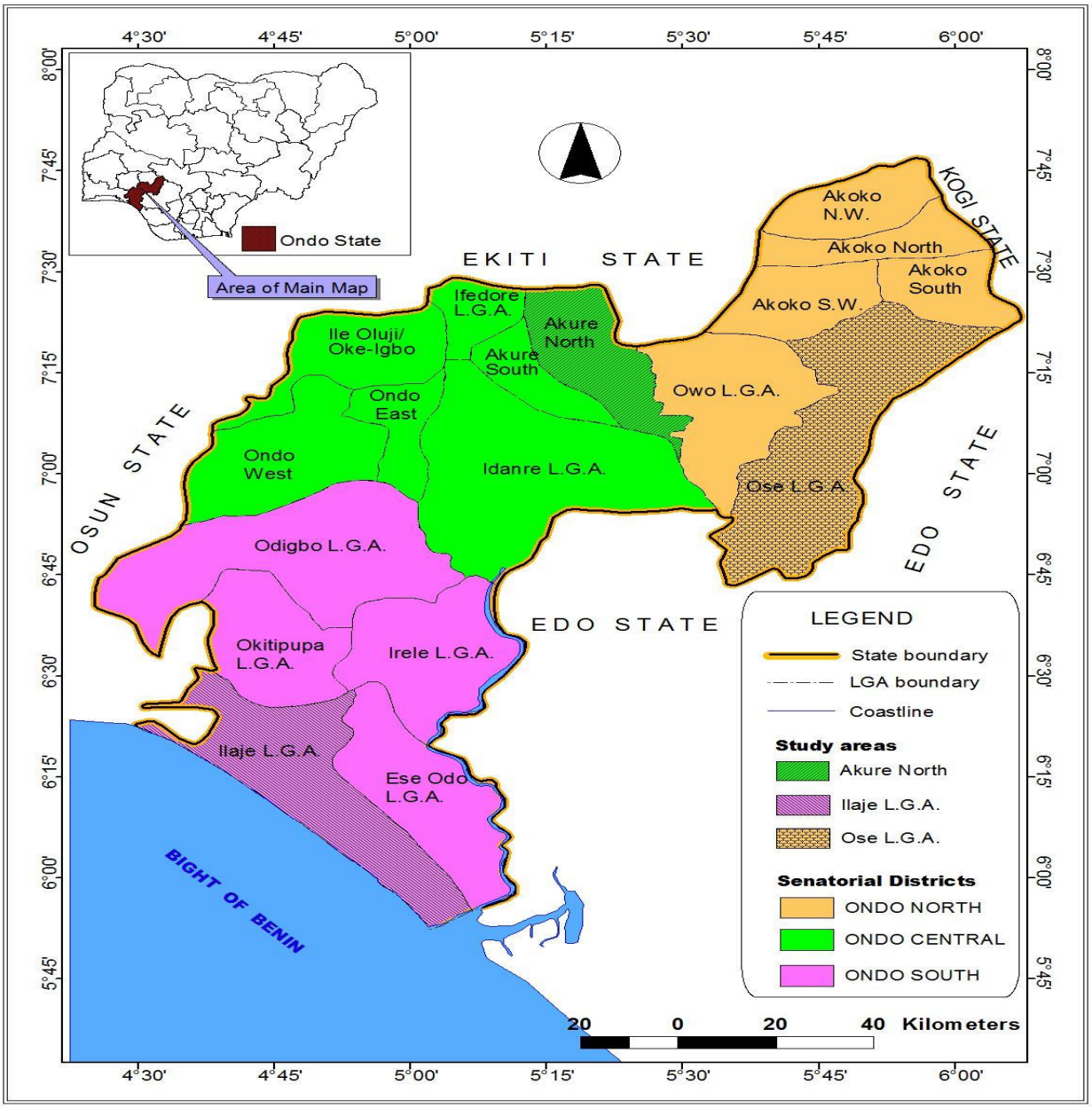

Fig. 1: Ondo State and selected local government areas of the study

Source: Ministry of Land and Survey, Ondo State, 2006

CHAPTER TWO

THE THEORETICAL/CONCEPTUAL ISSUES AND LITERATURE REVIEW

2.0 Introduction

The roles of theory in designing research in urban and regional planning was summarised in Donohor and Palmagreent's (1976) definition of theory. By their definition, "a theory is a set of inter-related constructs (concepts), definitions and propositions that present a systematic view of phenomena, by specifying relations among variables, with the purpose of explaining and predicting the phenomena". This definition clearly highlights the two major purposes of any theory: explanation and prediction. In this study, some concepts and theories relevant to the thesis will be considered in this chapter. To follow the examination of concepts and theories. In this chapter, there is a a critical review of researches conducted in the area of health care facilities planning and management.

2.1 Central Place Theory

The central place theory, though one of the classical theories that dealt with the location of urban facilities as discussed in Walter Christaller (1933), has been used extensively in discussions on facilities distribution in the rural areas, following the hierarchical order of health facilities. It has been argued that health service provision has constituted an important human activity and has attracted considerable theoretical and practical interests. Okafor (1983) and Mabogunje (1991) similarly pointed out from the welfare point of view that optimal distribution of health facilities was largely determined by the assessibility of services at the minimum aggregate travel cost. However, such an optimal specification linked the welfare problem closely with central place theory.

By application, the thrust of central place theory is that spatial pattern of central places display irregularities in the ideal case, if there is:

- a uniform place of constant population density and purchasing power;
- a linear variation of transport cost with distance; and an equal movement ease in all directions, then central places will spring up at evenly spaced points to serve

tributary market areas with goods and services. The aerial expression of this arrangement is one of regularly spaced settlements or central places with hexagonal market areas. When central places are considered in terms of their mutual relationship, their organisation follows a hierarchical pattern.

According to Onokerhoraye (1976a, 1976b), there was a functional relationship among the size of a central place, the order of the goods or services it offered and the size of its complementary region.

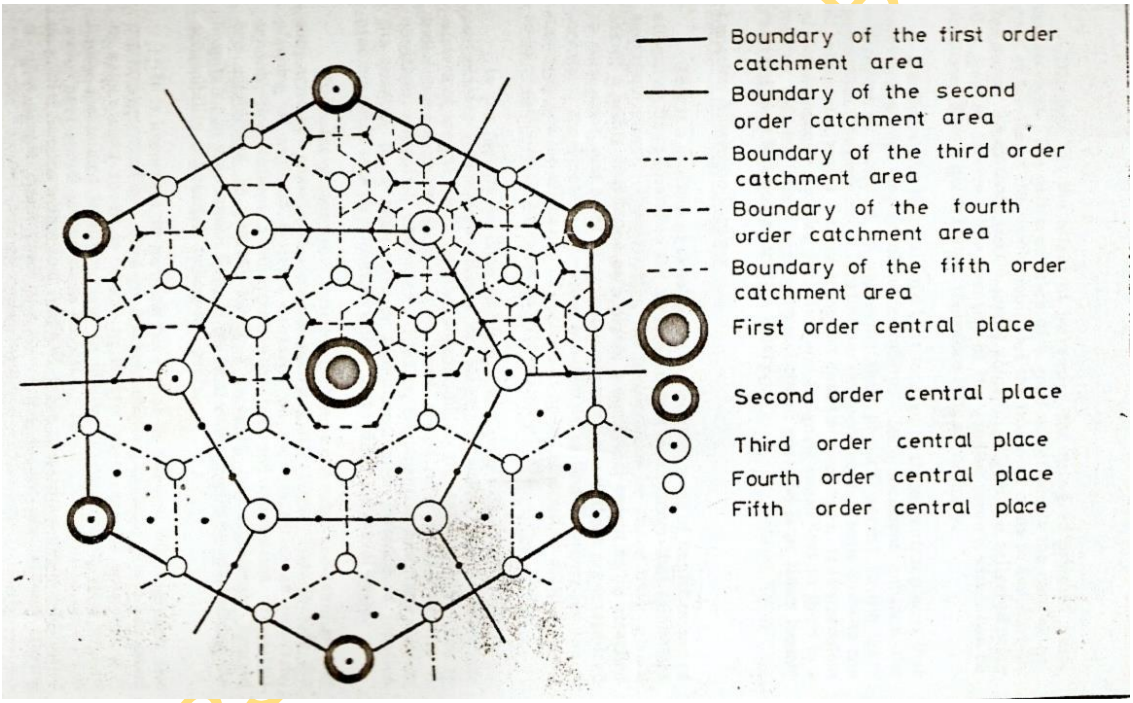

Fig. 2.1: Hexagonal arrangements of trade areas

Note: Adapted from Okafor, 1983.

Several questions concerning the basic postulates of central place theory remain unanswered. Such questions include the regularity of space settlement which does not exist in any ideal setting, the uniform population density and purchasing power, among others. Okafor (1983) argued that, though the aim was not to re-examine the validity of the central place theory, it might be instructive to discuss the concepts which underlied

the theory and had direct relevance to the interplay between location and the utilization of health facilities.

2.1.1 The merit of central place theory

Meanwhile, the concepts of the threshold population and range of a good which are implied in the central place theory were observed by Onakhoraiye (1996) to be relevant to the analysis and planning of health care facilities. According to Onakhoraiye, the threshold population for a particular grade of health centre was the minimum population that justified the allocation of scarce financial and personal resources to the establishment and sustenance of that grade of health facility. Below that level, there were two patients to allow the family planning health operate with acceptable efficiency. On the other hand, the range of a particular category of health facility was the maximum distance which the users would be prepared to travel. This distance would vary with the category of health facility and the mode of travel available to the users (Onakhoraye, 1996).

2.1.2 Relevance of central place theory

The application of this theory to planning and management of health facilities, which is the focus of this study, is for efficiency to be attained in the provision of health care facilities in the rural area, since the threshold population must exist within the range of those category of health care services. For instance, the theoretical central place theory resembled that of a concentric layer as depicted in figures 2.2, 2.3 and 2.4. From the existing situation, the theoretical limit the patient would have to travel before his health would be jeopardised was 5km. For instance, if the settlements were located outside the maximum area, it might be difficult accessing health care facilities. Using the hypothetical figure, the theory assumed the LGA headquarters as the central place which includes Ifon in Ose LGA, Igbokoda and Itaogbolu in Akure North LGA. Ideally, the capability of any geographical area to satisfy the threshold requirements for the provision of a particular category of health care facility would depend on the pattern of population density. There was therefore a generally marked difference between rural areas in Nigeria in terms of satisfying the threshold population requirements. The knowledge of threshold

population and the range of goods would enable the researcher to know the category of health facility to be located. In the rural areas where settlements were quite small in terms of population size, transport facilities were poorly developed or non-existent.

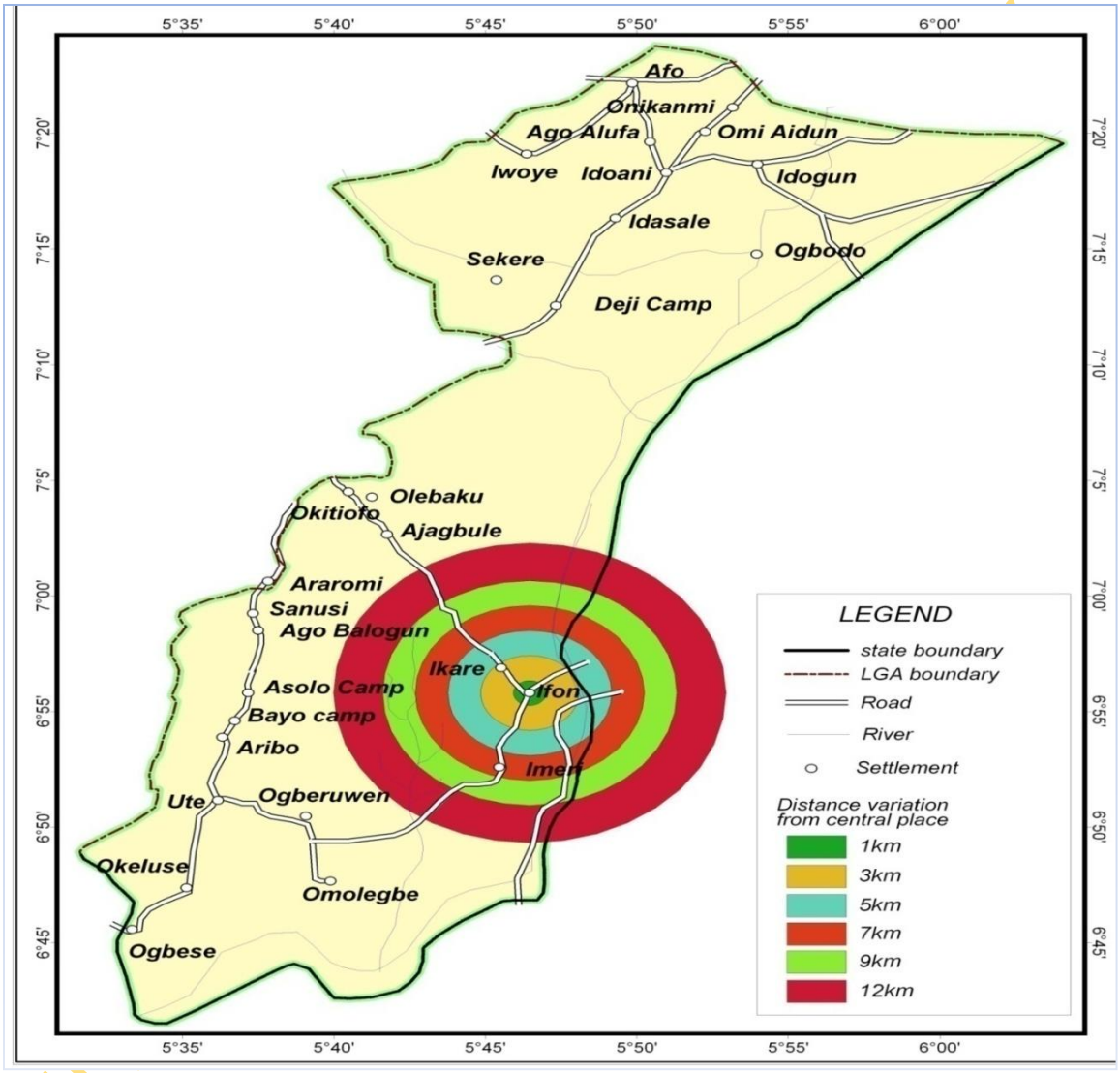

Figure 2.2: Hypothetical minimum and maximum distance covered to health facilities in Ose LGA
Source: Ministry of Lands and Survey, Akure, Ondo State, 2011

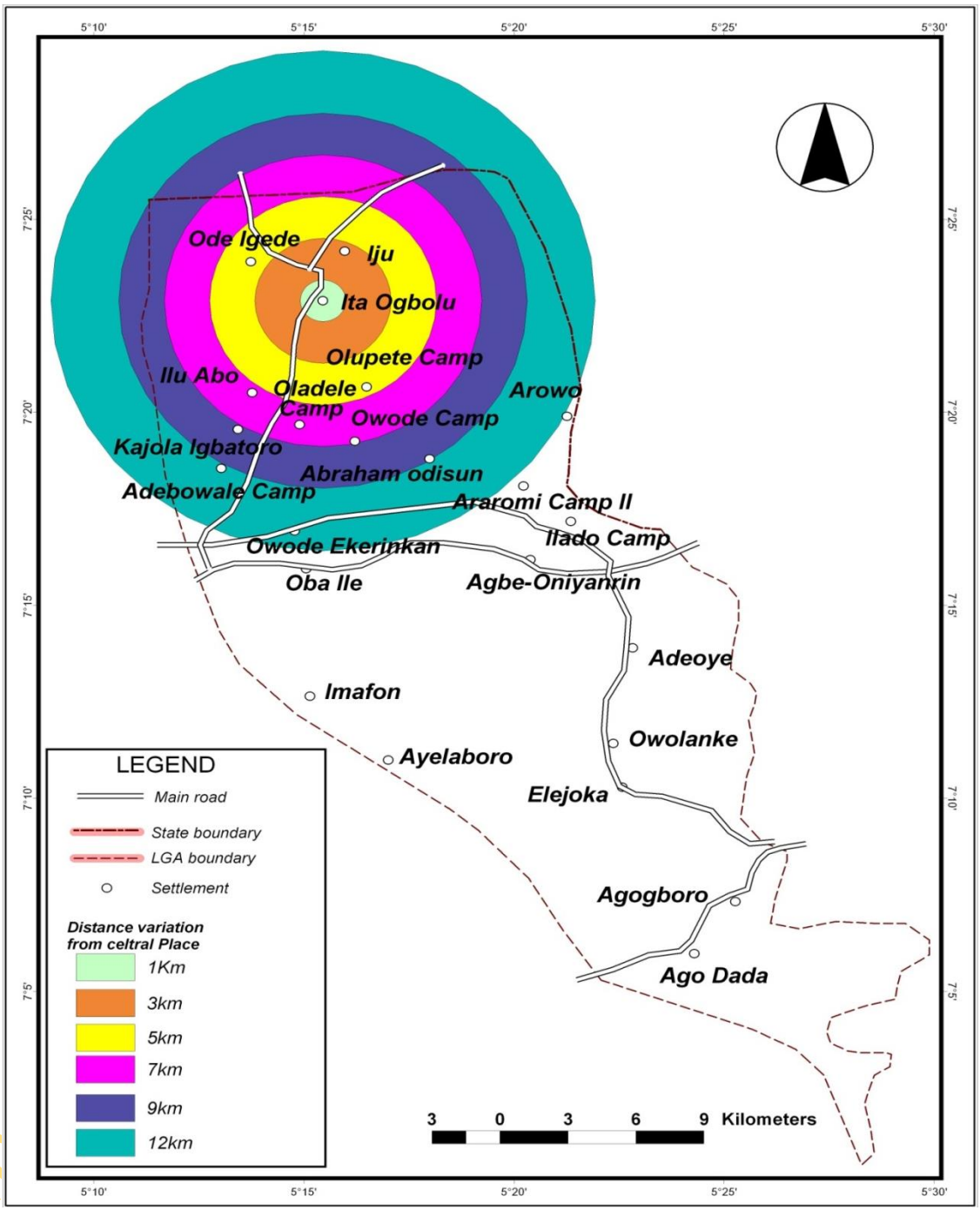

Figure 2.3: Hypothetical minimum and maximum distance covered to health facilities in Akure North LGA
Source: Ministry of Lands and Survey, Akure, Ondo State, 2011

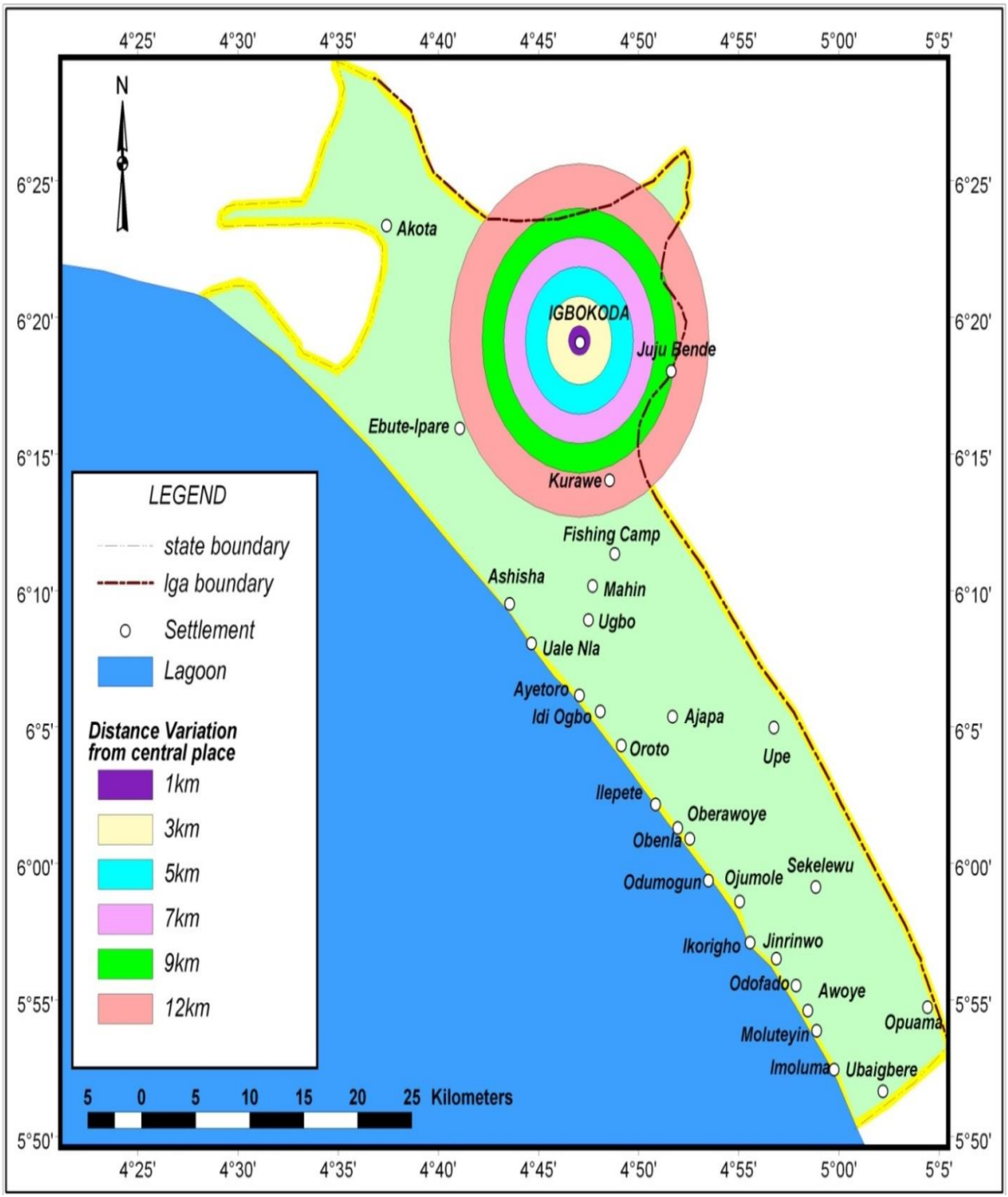

Figure 2.4: Minimum and maximum distance covered to health facilities in Ilaje LGA

Source: Ministry of Lands and Survey, Akure, Ondo State, 2011

2.2 The concept of environmental planning and management

Environmental planning and management (EPM) is another concept designed as an articulated, analytical framework and logical structure to facilitate better understanding of the dynamism of urban development and environmental issues and help in evolving convincing guidelines and/or strategies for intervention. Environmental planning and management is both an analytical and a prescriptive process which ensures that there is a constant flow of information from analysis to project formulation and implementation (Agbola, 2006). According to Onibokun (2006), the origin of EPM process entered the planning dictionary in the 1960s, with the social movement and revolution, which changed the concept and discipline of physical planning. It was argued further that the movement originated from the U.S.A with the integration of social planning with physical planning. Al Schuler, Brooks, Peter Marris, Howard Odum, and others, were among the earlier planners who propagated the concept of social planning anchored on the EPM process. Clarence Arsteins classical work titled "ladder of citizen participation" advocated the EPM process.

The goal by way of application of the EPM as described by Wahab (1998) was the improvement of health and productivity in cities through reduction in or elimination of environmental hazards/degradation and the protection of natural resources for sustainable socio-economic and physical development. The SIP-Technical Support Unit (1996) identifies three aims, which could be regarded as objectives of the EPM Process These are:

(i) to identify urban environmental issues before they get out of hand or become more expensive to deal with;

(ii) to agree on strategies and actions to resolve the environmental issues among all whose cooperation is required ; and

(iii) to implement strategies through coordinated public-private actions.

According to Wahab (1998), the EPM process comprised four main elements which constituted the condensed version of the states of, or activities to be performed under the process.

2.2.1 Merits of EPM

The merits of the EPM process are identified by Wahab (1998) as including: better environmental information and technical expertise; better environmental strategies and decision making; enhanced institutional and participatory capacities, and effective use of scarce resources for capacity-building and change. Greater inter-agency cooperation and collaboration, between local government and other agency, enhanced project demonstration and replication, healthy partnership between stakeholders in the area of local economic development and infrastructure delivery thereby stimulating the sense of belonging in the facility provisions among others.

2.2.2 The constraints of EPM

The major constraints of EPM includes, among others, political instability characterised by frequent changes in the political structure in the leadership of the local government; shrinking of responsibilities; misinformation or lack of information; non involvement of the popular sector, because it is considered as energy-sapping; poor budgetary allocation or lack of it; and lack of consensus among stakeholders on the prioritization of environmental issues, including the modalities to addressing the issues.

2.2.3 Relevance of EPM to the study

The concept fits into the study because it explains the role of various stakeholders in the planning and management of health facility. It also helps in understanding the multidimensional nature of health service delivery in the context of challenges individuals or a group faces in the provision of health care service. It ensures that in the decisions that border on facility provision, the various interest groups have to be carried along.

2.3 Three-delay model

The three-delay model which was proposed by Maine and Thaddeus (1993) depicted the roles of community and health system in the use status of emergency obstetrics care. This model postulated that the outcome of an obstetric emergency was influenced by factors that governed the decision to seek care. These factors were regarded as socio-economic in

nature, such as reaching the medical facility or arrival at the health outlet (characterized as accessibility to the facility) and receiving adequate treatment (characterised as receiving a timely and appropriate, or quality care) (Barkat, 1995).

The first factor related directly to the issue of access to health care facility and services. The factor could further be related to family pressure to give birth at home because of social pressure or owing to inadequate money for transportation. The second factor related to inadequacies within the health care system itself. The factor could be further explained by lack of properly trained personnel, transfusion equipment and other infrastructural inadequacies at the health facilities.

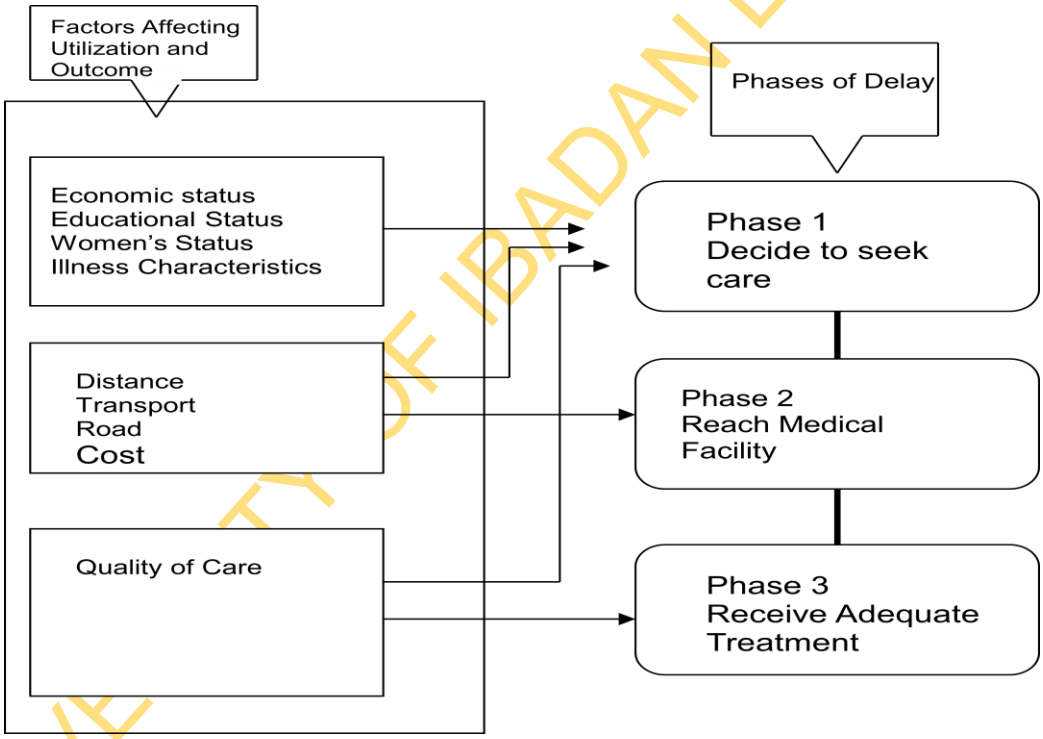

Figure 2.5: Three delays model: Delays between a woman and EOC

Note: the diagram was adapted from Maine (1993), *Journal of Health and Population in Developing Countries*, *1* (1), 57-67.

2.4 Literature review: the meaning of health and facility

Health encompasses physical and psycho-social well-being, not the absence of disease. Many factors influence health and well-being. Understanding the nature and scope of these determining factors is an essential element in developing health improvement strategies and in determining what indicators may be appropriate elements in a performance monitoring effort. In the Christian faith, the subject of health is so important that God said "I wish above all things that thou mayest prosper and be in good health even as your soul prospereth" (3 John, Verse 2, KJV).

According to Audy (1971), health is defined as a 'continuing property' that could be measured by the individual's ability to rally from a wide range and considerable amplitude of insults, whether chemical, physical, infectious, psychological, or social. One might prefer the expressions 'stimuli' or 'hazards' to insults. Such stimuli might be either negative or positive. The crucial thing is that the individual must respond to them. The World Health Organization (2004) describes health as a state of complete mental and social well-being and not just the absence of diseases or

Facility on the other hand is referred to as a means or an opportunity that rendered anything readily possible (Webster Dictionary, 1995). In the same vein, WHO (2005) agreed that the term 'facility' refers to any health service delivery site operating through the formal health sector. Health care facilities, therefore, can be regarded as object or structural opportunities that render health delivery readily possible. Health facilities are of paramount importance to the overall well-being of the human populace the world over, since they are basic necessities in all developmental drives. Therefore, for an effective functioning of human activities to have sustainable base, the society must understand the perception of needs and priorities given to the facilities.

2.4.1 Health policies and programmes in Nigeria

Health care system in Nigerian societies dated back to the pre-colonial era, and it has evolved to embrace the modern medical care and modern health system through the colonial and post-colonial periods of the Nigeria's national existence. Even the characteristic shared by traditional health care system of the pre-colonial societies (later merged into the entity Nigeria) showed there was some integration among the

communities, before the Northern and Southern Nigeria amalgamation. The only health care form, the traditional therapeutic health care system meritoriously responded to the economic and social situations of the Pre-colonial Nigerian indigenes, generally, according to the oral histories (Onokhoraye, 1986). Although, payment for the traditional health care varied according to illness severity and recovery duration, the treatment payment took the form of gifts of chicken, goat, foodstuff, or assistance in farm cultivation or house construction, and at other times, giving in marriage of patient's daughter or older child, all of which were economically responsive. Conversely, the unsanitary traditional health care administration constituted threat of high infant mortality and morbidity, in the pre-colonial Nigerian communities. For cutting umbilical cords, palm frond blade that had been tucked in thatched roof were used and reused at child deliveries, for instance. Yaws, leprosy and measles were common epidemics in the pre-colonial Nigerian communities.

With the advent of colonialism, the health care status in Nigerian communities advanced. It is necessary to recognise that the Arab culture and medical care was introduced to the Northern part of Nigeria in the 13th century with the introduction of Islam (Shcram, 1971). Similarly, during the earliest European contacts, Portuguese, Spanish, Denmark, Holland, France and Britain's ships came with licensed physicians to the various trading stations in Badagry, and towns across the Niger and Cross River.It was the colonial missionaries and Church missions that extended the medical efforts beyond the earliest narrowed ship owners and slave traders' interests. Mission hospitals were established, among which were Sacred Heart Hospital, Abeokuta (1895), and St Louis Catholic Hospital, Owo. Church Missionary Society, the Methodist, Baptist, Presbyterian and other missions made further medical efforts and reached several Nigerian communities (Shram, ibid.). However, the mission medical health personnel were unqualified and their outreaches were incomprehensive. With the Islamization of Northern Nigeria, Muslim marabouts from their home bases cared for the peoples regardless of their religious professions (Lasker, 1931; Sebia, 1982). The Marabouts' health care services had the shortcoming associated with the traditional health care system.

The British Army Medical Service offered medical treatment to the colonial government and the indigenous civil servants, and incidentally took some portion of the local populations. This became the earliest public health service in Nigeria. Subsequently, at the inauguration of the colonial Ten-year Plan for Development and Welfare (1946-1956), N10.1 million (9.5% of the total investment) was allocated to implementing the public medical and health services agenda. Consequently, health facilities were provided and enhanced in Abakaliki and Akure, while the School of Sanitary Inspectors was established in Abba (HMGN, 1946). Federalism was adopted in 1954 in Nigeria; and the colonial government reviewed the health care plan and extended its implementation to 1960. Important shortcomings of the colonial planned medical and health services included the decline to 7.1% of the fund allocated to the health sector (1956-1960), after Nigeria became a federation, and the absolute preference for urban health care development, exempting the larger rural populace. Indeed, the new regional governments offered free medical services to the public servants where government health facilities were available; and the western region further attempted the provision of free health care services to all children under the age of 15. But the efforts still never met the peoples' health needs (Aregbeyen, 1983).

The post-colonial Nigerian government continued the colonial legacy of planned development. After Nigeria's independence in 1960, The First National Development Plan (1962-1968) allowed for decimated government attention to the Nigerian health sector, allocating to the health care plan N20.6 million (2.7% of the total expenditure). Yet, only N5.9 million of the allocation got expended in the plan period, which went mainly into curative and not preventive health care programmes. The Lagos Teaching Hospital and Lagos General Hospital were established; but the plan to expand public health laboratories and found the Institute of Preventive Medicine was jettisoned (Daramola, &Aregbeyen, 1983). The Second National Development Plan (1970-1974) came after the Nigerian civil war, and the allocation to the health sector was N107.6 million (95.2% of the total expenditure). This allocation ranked the health sector sixth on the development plan sectors' scale. The major achievement at the time was that the Nigerian government expanded facilities in medical schools and teaching hospitals, and more doctors and medical personnel were turned out to restore the war-damaged health

conditions of the rescued nation. Nevertheless, the health institutions and personnel were inadequate to cater for the post-war mass decline in health and sanitary conditions of Nigerians.

The Third National Development Plan (1975-1980) in the post-colonial period allocated to the health sector an estimate of only 2.5% of the total expenditure of the state governments, so that higher preference for the other sectors still subsisted (Egunjobi, 1983b). Evolved from the third plan was the Basic Health Service Scheme (BHSS); and this was targeted to provide both preventive and curative medical facilities and health services to every 150,000 population of the Nigerians in their respective basic health units (Falaiye, 1980). Again, the preventive and curative efforts were aimed at eradicating malaria, tuberculosis, measles and smallpox diseases among the populace. Unfortunately, the poor communication between the policy formulator Federal Ministry of Health and the policy implementer Local Government Councils (LGCs) caused the abortion of many health projects slated in the ambitious public health care agenda (Bankole, 1980).

The Fourth National Plan Development (1981-1985) appeared much better spelt-out than the third, still, as it addressed, specifically, developing primary health care, secondary health care and tertiary health care services in the entire Nigerian health care system. Thus, the BHSS was converted to Primary Health Care (PHC). This new broader agenda entailed intensified manpower development, management of health institutions, medical research and health planning, as well as drug supplies concern, across all the federated states, LGAs and the communities (Osemwota, 1992). Indeed, a solid foundation was laid for the Nigerian primary health care, during the fourth national development plan.

Last but not the least, there have been the post-fourth National Development Plans (1986 to date), and these have emphasised the expansion and consolidation of primary health care service delivery. They have also involved rehabilitation of secondary and tertiary health care institutions as part of their focus on the health care sector. The primary health care was conceived in this latter development plan period as the main vehicle by which the goal of health-for-all Nigerians will be attained (Aregbeyen, 1996). The Post-Fourth National Development Plan changed from the 5-year term to the longer

15 to 20-year plan. It was opened with the Rolling Plan of 1986-1992, the first three years of which ensured a vigorous implementation of the PHC agenda. In 1986, the PHC plan had experimented with 52 local government areas (LGAs); but in 1990 model primary health care delivery centers were established in 8 LGAs spread over the new four geopolitical zones and 293 of the 453 LGAs had their primary health services upgraded (Osemwota, 1992). In the 1990-1992 rolling plan period, PHC committees were set up at the local, district and village levels; village health workers in villages and traditional birth attendants were trained; and health centers in villages were upgraded to serve as referral points in the individual districts. In addition, the Expanded Programme on Immunization (EPI) covered 30% of children less than 2 years and 30% of pregnant women were immunized against tetanus. Real greater success was achieved with the Oral Dehydration Programme.

As at 1997, 81.20% children immunization had been accomplished; and infant mortality had reduced from the average of 141 per 1000 births in 1992 to 114 in 1997. From the average of 13 in 1992, maternal mortality rate per 1000 births had reduced to 10 in 1997; and the percentage of women using contraceptives had increased from 15 per 1000 in 1992 to 25 in 1997.Today, the 774 LGAs are divided into health districts, each of which stations a health center serving as entry point into the health care system for their catchment areas. Nevertheless, the enhanced health care system and expanded primary health care delivery has suffered inadequate medical staffing and equipment. Indeed, a number of the LGAs were without medical doctors, to be specific. The success and coverage of the PHC programmes will be comprehensive, only if it is provided with due manpower and facility equipment.

2.4.2 Alternative medicine for health care

The cultures of pre-industrial, traditional societies are usually complex and deal with the environment in sophisticated ways. Traditional medicine exists in various forms and under a range of names, including non-professional, indigenous, or traditional medicine. Although there are nine inclusive terms, alternative medicine is widely used today for referring to the traditional medicine (Good, 1987).

Four general types of traditional practitioners can be identified (Para, 1993). These are: spiritual or religious healers, magic and herbalists, technical specialists such as bone setters, and traditional birth attendants. The first category, spiritual healers, is the most common and includes respected healers and charlatans alike. Religion and magic have always been closely tied to healing in traditional societies. Supernatural beings are believed to affect, among other things, illness and health. The healers mediate between the supernatural, the patient, and the community (Good, 1987). Herbalists focus on the use of medicinal plants to cure illness. Knowledge of herbal formulations is, sometimes, codified, and sometimes, simply passed down from healers to apprentices.

Effort in research over time has shown that most traditional medical systems are confined into limited area of specific populations, scattered throughout every continent (Gelser, 1984). Native Americans of North and South American origins, numerous African tribes, and a variety of groups in Asia practise traditional medicine. It was estimated that traditional healers were the basic providers of health care in various guises for up to 90% of the rural population in South Asia and Africa. Various pre-scientific medical care systems might involve directly or indirectly 80% of the world's population (Phillips, 1990). Robert (2000) submitted that although it was difficult to generalise about the medical practices of the people, some ideas and techniques were widespread. For example, diagnosis and treatment could be carried out by immediate family, kin and/or group leaders, as well as by healers. The various treatments held in common include the use of medicinal herbs, prayers, the sacrificing of animals, exorcisms, the wearing of sacred objects and the transferral of disease from one person to another. Such treatments often depend on an intimate knowledge of inter-community relations for them to be successful. The traditional treatments are, especially, effective in dealing with mental illness.

A healer may be a judge. Many diseases were seen as stemming from violations of the mores or taboos of the society. The sick person has broken relations with the supernatural or with other humans and his or her suffering is a social sanction. The healer's diagnosis is a kind of social justice, and treatment often involves a cathartic confession. Because village life was very close-knitted, tensions must be resolved for the group's survival. Thus, the healer also plays a role of creating psychic unity. Treatment

often includes having sick people, their relatives and other people, bringing out their ill-feelings towards each other. The healer's knowledge of community conflicts is important in this region (Roberts, 2000).

Another function of the healer is to entertain – that is, ritual performance before an audience (Good, 1987). Many Africans expect the ritual treatment to be included along with the applied traditional medication. Thus, music, drama, story telling, mythical accounts, dance and fantastic costumes have become part of the healing ritual. The healer may even go into a trance. These efforts can inspire intense emotion in the audience and have a positive effect on the group's everyday behaviour.

There are different categories of traditional medicine. Stepan (1983) has described four categories of traditional medicine: exclusive, tolerant, inclusive and integrated. Exclusive system of regulation allows only the practice of modern bio-medicine. The justification for a ban of other forms of practice is that it protects the public from unqualified practitioners. However, the exclusive modern bio-medicine has the effect of sustaining a monopoly on the part of the scientific medical hierarchy. Exclusivity was introduced into many European territories during the colonial period, and traditional healers have since had little, if any, legal standing or official recognition. Western medicine was introduced to Korea by the American missionaries and Japanese (western trained) doctors at the end of 19th century. The Korean governments have since established policies in promoting western medicine while suppressing and ignoring traditional practices (Son, 1999).

The intolerant legal system can be found in countries like Germany, the United Kingdoms, former British colonies and some Latin American countries. The intolerant legal system embraces the practice of various forms of alternative medicine as legally tolerated. Uganda, Sierra Leone and Ghana allow any system of therapeutics, provided its practitioners are trained and recognised by their communities. Some former French African colonies have been slow to extend legal status to traditional medicine, and countries such as Lesotho and Swaziland have attempted to limit the practice of traditional medicine in one way or another (Phillips, 1990). It could be said that the bio-medicine has become the dominant form of health care system and its practice is strictly regulated.

Inclusive system considers both bio-medicine and traditional medicine legal. The inclusive system usually occurs where popular traditional system predated modern medicine. In South Asia, indigenous medicine is part of the state-regulated structure of health care. In India, there is Central Council of Medicine responsible for the regulation and teaching of Arynveda Siddha and Unani (Stepan, 1983).

2.4.3 The planning of health care facilities

Formulation of objectives and planning for their achievement are important for improving health care management at the national, regional and local levels. The planning of health care facilities requires the definitions of a strategy that will facilitate careful implementation of the necessary measures and the appropriate allocation of resources according to authorities, health care workers, and the public, and for defining further actions that may be needed. According to WHO (1979), the problems of planning, programming, building, staffing and operating health care facilities were complex and might not be solved without considering economies, manpower policy, town and country planning, means of communication and other factors pertaining to the socio-economic field.

Meanwhile, strategic planning was defined as the process by which most health care organizations systematically identify their resources, capacities and capabilities for the purpose of generating profits and allocating capital resources (Federal & Miller, 1992). Business strategy, a component of strategic planning, may be viewed as the outcome of health care organizations in measuring up to their external environments (Ginn, Young, & Beekun, 1995). With increasing competition in the industry, organizations must make decisions about strategic selections in products and services to compete in turbulent markets (Beith & Goldreich, 2000; Cochrane 1999; Eisenstat & Dixon, 2000; Greisler & Stupak, 1999; Griffin & Schryver, 2000; Hatch & Rich, 1999; Hessler, 2000; Langabeer, 1998; Lawry, 1999; Moore et al., 2000; Paulk & Hinden, 2000; Press, 2000). Gin et al. (1995) found out that business growth and strategy changed by type of strategic positioning of the organization. Clouse (1992) suggested that organizational growth objectives must be consistent with financial realities of capital structure, since rapid

growth could strain resources and create financial difficulties. The same study also indicated that growth decisions should be understood to evaluate the impact on all organization objectives.

The Fuzzy Theory has been used in the area of planning. Most of the early interests in Fuzzy Set Theory pertained to representing uncertainty in human cognitive process, but now apply to problems in engineering, business, medical and related health sciences and the natural sciences. Rinks (1981) cited a gap between aggregate planning theory and practice. According to him, managers preferred to use their own heuristic decision rules over mathematical aggregate planning models. Using fuzzy conditional 'if-then' statements, Rinks developed algorithms for fuzzy aggregate planning models. A set of linguistic terms relevant to aggregate planning were defined and used to construct protocol managers (that is, decision rules). Exponential membership functions were adopted and used in the algorithms. And the fuzzy algorithm framework was applied to the classic Holt, Modigliani, Muth and Simon (HMMS) paint factory data set. The total cost solution generated by fuzzy aggregate planning algorithm exceeded the linear decision rule solution of HMMS by 5.0 percent. The strength of the fuzzy aggregate planning models included its ability to capture the approximate reasoning capabilities of managers and its ease of the formulation and implementation. The robustness of the fuzzy aggregate planning model under varying cost structures was, in addition, examined in Rinks (1982).

Gen et al. (1992) presented a fuzzy multiple objectives aggregate planning models. The model was formulated as a fuzzy multiple objectives programming model with objective function coefficients, technological coefficients and resource right-hand side values, represented by triangular fuzzy numbers. A transformation procedure was presented to transform the fuzzy multiple objective aggregate planning model into a crisp model. The transformation procedure and computational algorithm were demonstrated for a numerical example involving a six-period planning horizon. Multiple objectives of minimising total production costs, inventory and backorder costs, and changes in the work force level were further used.

In their contribution, Inuiguchi et al. (1994) compared possibilistic, flexible and goal programming approaches to solving a production planning problem. Unlike conventional methods, possibilistic programming allowed ambiguous data and objectives to be included in the problem formulation. A production planning problem ,consisting of two manufacturing processes, two products and four structural constraints, was considered. The problem was solved using possibilistic programming. A comparison of the three solutions suggested that the possibilistic solution best reflected the decision maker's input, thereby emphasising the importance of modelling ambiguity in production planning. Fuzzy theory has been useful in modelling the planning and productivity of management environment of facilities in the rural area.

In evaluating the impact of organizational objectives, certain traditional strategies were found to have greater or lesser financial or long-term impact (Langabeer, 1998). The same study found that market share was shown to have no relationship to financial performance. According to this study of teaching hospitals, pricing strategy was the most significant competitive strategy affecting financial performance. Low cost strategies have resulted in successful financial performance in stable markets but remain unproven in turbulent markets. Such findings were consistent with observations of others that organizations might position themselves to gain financial resources (Beith & Goldreich, 2000; Cochrane, 1999; Coddington, Moore & Clarke, 1999; Gapenski, 1999; Ginn et al., 1995; Greisler & Stupak, 1999; Hessler, 2000; Press, 2000; Seidner, 1999). Despite these findings, Meyer et al. (2000) in their study of 1,721 primary h e a l t h care physicians found that cost control measures in the form of financial incentives did not have a consistent effect on costs of evaluation of common primary health care problems.

Good decision-making required that financial impact of investments be recognized (Beith & Goldreich, 2000; Campobasso, 2000; Cochrane, 1999; Farley, 2000; Gapenski, 1999; Gapenski, 1990; Greisler & Stupak, 1999; Hatch & Rich, 1999; Hessler, 2000; Krentz & Gish, 2000; Lawry, 1999; Prince & Sullivan, 2000; Royer, 2000; Seidner, 1999; Sobol, 2000). Straley & Schuster (1992) found that most hospitals lack formal processes for evaluating routine capital projects. They indicated that most hospitals would not invest in high return projects contrary to

their purpose, and posited that formal project evaluation criteria must include financial, operational and market data. The authors indicated that projects that made business sense should rank higher than those that were counter-intuitive to market conditions. They also stressed that various organizational structures and local market conditions might necessitate different evaluation criteria in the strategic planning process. Similarly, Farley (2000) noted that organizations must profile investment risk to understand its impact in organizational planning and performance.

Greisler and Stupak (1999) found out that executives made clinical capital investment decisions, based on one of five models. In this study, three hundred and ninety-six chief operating officers (COOs), chief medical officers (CMOs) and chief financial officers (CFOs) were asked which of the five decision-making models in the literature had been used in acquiring clinical equipments. From their researches, the Garbage Can Model (a decision model based on ambiguity as the outgrowth of the confluence of people, problems and solutions) was the dominant method used to allocate resources for clinical capital equipment purchases. Other decision models (Rational, Incremental, Mixed Scanning and Political Decision models) were used, though there was a clear preference for the ambiguous approach. The surveyed executives showed interest in pursuing more quantitative methods.

In the findings of Ginn et al. (1995), a significant relationship existed between hospitals' business strategy and financial structure. This was also observed by Beith and Goldreich (2000). Beith and Goldreich pointed out that proper strategy alignment required financial strategy, consistent with business strategy; and further poited out that the financial structure and the accounting and financial strategies of an organization were related to its business strategy. Sustainable financial growth models could assist organizations in program planning efforts (Clouse, 1992) to ensure appropriate resource allocation.

2.4.4 Planning for equity in access to public health facilities and services:

Equity has become a long-standing issue in health and health care delivery since the Alma-Ata Declaration in 1978. The World Health Report (2000) reiterated this issue

by taking equity and efficiency as the most salient features of health system performance. However, reducing inequity to health requires not just development of indicators and measurement of the problems, but a policy which puts equity on its agenda and encourages those (indicators and problems measurement), especially in economic decision-making positions, to consider the equity implications of their policies.

Access to health care has been variously defined and understood, covering three main facets: (a) economic access, (b) physical or geographical access, and (c) cultural access. These three facets have been widely argued to be highly significant, although not the sole determinants of the use of health services by a population, in particular poor rural populations. According to Nulton (2002), economic access was essentially the cost of using a service. It could include official payment for health services; unofficial payment of health services; other payment related to health service use; and sacrifice of time to attend health facilities. Geographical access was generally understood as the distance to a health service, while cultural access was the cultural acceptability of health services, relating to the type of medicine and who the health care providers were.

In the literature on the five main countries in Eastern Europe and Central Asia including Bulgaria, Kyrgyzstan, Romania, Tajikistan, Ukraine, and Switzerland, according to Nulton (2002), there was variation among the six countries in terms of equity in health care delivery. Indicators of equity of access were selected to reflect the definition as the freedom or ability to make use of health services. Access could also be reflected by actual use of health services, as well as outcomes, as these both had strong links with the three types of accesses earlier listed. A recent series of documents on equity produced by the WHO, representing consensus on equity measurement covered the following broad areas:

1) Health status (growth, mortality, morbidity, life expectancy);
2) Determinants of health (water and sanitation, food supply, housing, poverty, education);
3) Health care financing (burden of payment for health care)
4) Health care resource allocation (expenditure per capita, distribution of qualified health care personal, distribution of health facilities and beds); and

5) Utilization and quality of care (immunization coverage, antenatal care and delivery coverage, contraceptive prevalence rates, availability of essential drugs, use of referral care by disadvantaged population.

The National Sample Survey (NSS) carried out to analyse household data on health care utilization and expenditure for the period 1995-1996, in India, revealed that the proportion of the total cost of treatment of annual per consumer capital expenditure varied between 40% in Kerela to 160% in the poorer states (Gumber, 2000). In contrast, in the top 10% of the population, such proportion ranged between 5 to 40%. The figures showed clearly significant disparity/gap/difference or inequity between the worst-off and the well-off.

One of the factors affecting access to the public health care, according to Couplers (2000), was the availability of health facilities. In other words, availability of health facilities was used in determining potential access, especially when the facilities were within easy reach in physical and financial terms. For instance, the survey data in South Africa revealed the poorest one-fifth of the population had to travel two hours, on the average, to obtain medical care, while the rich people, on top, reached the facilities in few minutes. In Sri Lanka, by contrast, people in the poorest quartile travelled 4.7 km on the average to obtain medical attention, while people in the richest quartile travelled 3.3km on average for the same purpose. In Ghana, simulation suggested that a reduction of 50% in the distance to public facilities would translate doubling of the facilities' use. Also, in Malaysia, the number of nurses per capita was found to have a significantly positive effect on pre-natal care services, while in Nigeria, the total facility expenditure per capita in the population served was found to significantly influence the choice of facility as well as the decision on whether or not to seek health care (EQUINET, 2000).

Globalization and liberalization of international trade within the context of multilateral international agreements such as GATS (General Agreement on Trade and Services) and TRIPS (Trade-Related Intellectual Property Rights), if not well anticipated and prepared for, will impede the effort towards equity in access to health personnel to places of origin and destination – though GATS might accentuate the present imbalance of human resources for health to those needed for rural areas. This would definitely affect the access to health care by the poor.

This globalization has made the private investor to play a visible role in health care delivery. Meanwhile, privatization without good stewardship or governance in health (guiding, regulating and overseeing) by respective governments has proved to be an important causative factor for the spiralling development in health care delivery, with the poor being the worst affected. According to EQUINET (2000), improving equity in access to public health should be based on the various evidences that bordered on availability of health facilities and the like. However, health systems are not limited to the set of institutions that regulate, finance or provide services, but also include organisations providing inputs to health services, particularly to the human and physical resources (knowledge and facilities). Those organisations, such as universities and other educational institutions and research centers, are a vast array producing specific technologies. EQUINET also contended that national output measures were negatively affected through a loss of high income earners. There were also cost in unmanaged diseases burdens and costs of seeking care at higher-order health facilities, where personnel were found, to households, rather than at primary or secondary health levels (EQUINET, 2003).

According to Couper and Worley (2002), various recruitment initiatives had been suggested as means of improving the distribution of health personnel. Making a special effort to recruit medical students from rural areas had been posited as one way of helping to solve the problem of poorly staffed rural health facilities. Wider public sector expenditure limits were, moreover, noted to have constrained efforts to deal with shortfalls in pay and levels of health personnel. Mal-distribution itself implied a gap between need (demand) and supply, while differences based on area, income or factors other than health need or planning implied distortions within health systems that might undermine the capacity to meet health needs. Therefore, policy-making would be supported by research that not only identified the different causal layers underpinning each of the primary determinants but also why these determinants were unfavourable in undeserved areas of community action for health, particularly within primary health care systems (EQUINET, 2003). Health care workers move from areas of poverty and low socio-economic development to more highly developed areas. Personnel migrate from rural to urban areas, from public to private sectors, from lower to higher income

countries. International migration further increases and exacerbates inequities that exist between the public and private sectors, between urban and rural areas. The knowledge and skills loss from the poorer to the richer areas and countries are considered as a form of reverse (poor to rich) subsidy (Parlarath, 2003).

Atiken and Kemp (2003) identified some exogenous push factors which are also notable. These exogenous push factors included political insecurity, crime, taxation levels, repressive political environments and falling service standards. Movement was also influenced by pull factors, including aggressive recruitment by recipient countries, improved quality of life, study and specialisation opportunities and improved pay. Atiken and Kemp further argued that the push and pull factors were mitigated by stick factor in some countries. The factors had led to greater personnel retention, including family ties, psychological links with home, migration costs, language and other social cultural factors. Stay factors influence decisions to remain in recipient countries and influence rates of return of personnel.

2.4.5 Justice, equality and equity in health care facility management

There is wide agreement that justice in health care goes hand in hand with equality (Beauchamp & Childress, 2006). Undoubtedly, the principle of justice is at the core of these issues, though its meaning is highly contested. Due to this, there has been disagreement over what equality means (Culyer, 2001). There are those who believe that a material perception of equality is justified in order to achieve justice in health care (Daniels, 1985). This means that justice in health care will be achieved by inequality in order to provide fair opportunity for all members of the society.

Relying on Raivis Theory of Justice (Raivis, 1971), Norman Daniel argued that helping people meet their health care needs maintained their normal functioning which had a major impact on their social interest in fair opportunity (Daniels, 1985). In addition, Ian Kennedy contended that a just distribution of health care resources must provide preference to the weakest and least disadvantaged people in the society because they were least likely to have the opportunity to enjoy an equal share of what the rich and privileged had and were, thus, most in need of help. The argument that the state should fairly distribute its health care resources to promote the health of those who need medical

services seems convincing. It implies that everyone has equal access to an adequate health care service, but it may not be the best available one. According to Daniels (1985), however, the next practical requirement was to set a hierarchy of needs, namely to decide whether treating a specific medical condition would receive preference over the treatment of other conditions.

Daniels (1985) advocated for a health care system which had at least two tiers: a basic tier which included health care services that met health care needs, or at least met important health care needs, as judged by their impact on normal community range; and a second tier which included the provision of less important needs. One possibility for resolving, at least, part of the difficulties and disagreements is to determine a package of health care services that the state will provide for its citizens. This mechanism is employed in Israel as well as other countries. In respect of this option, the state sets a basic package of services which, it believes, should be provided for the citizens either freely or at low costs. Services not included in this package are provided privately, requiring the patient to pay for the service she/he needs. Moreover, establishing a package of services can reflect a communitarian perception by arriving at a social agreement on the important values which help the state to determine the priorities in the basket of services. Determining the content of the health services package should involve a debate among professionals, policy makers, patients' representatives and members of the general public, regarding the hierarchy and the content of the health care services (Daniel, 1985).

The difficulty in determining the new treatments or medications which will be provided freely refers back to the ethical issues. First, it seems that an egalitarian principle of fairness is not enough. There may be a need to employ utilitarian criterion of whether the new technology is cost effective. Several commentators have argued that in this context a combination of different ethical principles should be applied (Williams, 1997).

2.4.6 The political pathology of health concept

The great equation "Medical Care Equals to Good Health" has been proved wrong because, more often than not, availability of medical care does not necessarily boil down to better health care delivery (Wilbulskey,1979). The best estimate, therefore, is that the medical system (doctor, drugs, equipment and hospital) affects about 10 percent of the usual indices for measuring health, such as whether one lives at all (infant mortality), how well one lives (morbidity rate), and how long one lives (life expectancy). The remaining 90 percent is determined by factors over which the medical system has little or no control. These factors include individual lifestyles, social conditions, and physical environments. In other words, most of the adverse effects of housing are beyond the purview of the therapeutic measures.

Consequently, physicians and hospitals have little or no experiences in terms of housing or housing hazards. Thus, medical establishments naturally focus on treating the symptoms of diseases with drugs rather than eliminating or reducing exposure to the hazards that, at least, partially cause the diseases (Egunjobi, 1999; Patrick et al., 2003). Due to the prevalence of other factors which account for 90 percent of the indices used to measure health conditions, coupled with the fact that distribution of physicians is determined by rational choice, as physicians locate where their psyches as well as economic incomes are maximised, there is profound inequality in the health care delivery system.

Against this backdrop, there is an urgent need for government intervention in the health care delivery. Consequently, the more government is neo-liberal, the bigger the inequality in income; and the more a society is market-oriented, the weaker the thrust of social cohesion (Preston, 1996). Accordingly, a society with major income inequalities will have a higher percentage of people with low income and poor housing and health.

Yet, the unequal distribution of income is the result of historical, cultural, political and economic processes. Desirably, strategic investment in government policies through a just and equitable distribution of public and private resources can ensure the greatest impact in reducing inequalities in health and improvement in public health, in terms of provision of basic infrastructures and facilities for improved housing conditions.

In a nutshell, if there are substantial increase in investment in social services, especially health and housing services, and if these services are equitably and justifiably distributed, there will be a great impact on the health and productivity of individuals. This, in fact, is the kernel of the productivity theory in health and housing.

2.4.7 Accessibilty to health facilities and its measure

Accessibility is one of the most frequently used terms and yet less defined in urban and regional studies (Ayeni, 1979). Viewed from the same perspective, Hasker (1981) stated that accessibility had a number of dimensions, thereby making it to face both definitional and measurement problems (Gould, 1969). All these qualifications, notwithstanding, Ingram (1971) defined accessibility as the inherent characteristic or advantage of a place with respect to overcoming some form of friction. In Ingram's definition, it was the location (that is, a place) that enjoyed access. However, Ingram went further to classify accessibility into two: relative accessibility and integral accessibility. Relative accessibility measured the degree to which two places or things were connected while integral accessibility measured the degree of interconnection of points or things to the system.

Okafor (1984), in the study of accessibility to general hospitals in rural Bendel, Nigeria, regarded accessibility simply as a case of getting to a place. Meanwhile, Moseley et al. (1977) defined accessibility in the light of rural accessibility, referring to physical access to employment, services and facilities in rural areas. It was the ability of rural residents to get to or be reached by the health services/facilities which were relevant to them as explained by Akinola (1997). Furthermore, the concern of Wach and Kumagai (1973) was the concept of physical accessibility as a social indicator. In general, accessibility should be understood in terms of ease and the cost of movement (Wach & Kumagai, 1973; Hagerstand, 1974). Nevertheless, Daly (1975), Barwell (1966) and Oloruntoba (1990) referred to accessibility as the ease with which people could reach distant but necessary services.

Health is central to community well-being as well as to personal welfare. It has a strong influence on people's earning capacities and it is fundamental to people's ability to enjoy and appreciate all other aspects of life. Aregbeyen (1992) related accessibility to

health facilities as an individual or a community's ability to obtain health care. Therefore, from the spatial perspective, physical accessibility of members of a household to health care facilities is of considerable importance; however, one major constraint to accessibility is distance. As a general principle, it has been stated that the greater the distance between two points, the lower the probability that the points will be functionally related. A large number of studies have shown that with increasing distances in road transport journeys to hospital and to educational institutions there has been a consistent decline in contacts (Okafor, 1984; Olajuyin et al., 1997).

Similarly, some studies that were undertaken in different parts of Nigeria have equally shown variations in maximum distance which people travel to utilize health facilities (Adejuyigbe, 1973; Olayiwola, 1990). Adejuyigbe (1973) noted that there was a limit to distance, which people were ready to travel in order to enjoy some health services. He further mentioned that attendance at each medical center was a function of both the types of services available in the health facility and the distance from other medical facilities providing similar services. In another related study in Ife region (which was at a lower scale), Adejuyigbe (1977) showed that people travelled 7km to utilise health facilities. In the same vein, Okafor (1984) in his accessibility to general hospitals in the then Bendel State revealed that there was a disparity of access among the rural population to the general hospital in the state. In Ugeli, Burutu and Ariocha LGAs, for example, the simple households were about 25km away from the nearest general hospital, whereas Ndokwa LGA was ranked as the least deprived in terms of accessibility to general hospitals in the then Bendel State with only 5 percent of the sampled households that travelled more than 8km to the general hospitals (Okafor, 1984).

Furthermore, in his study in Oranmiyan LGA of Osun State, Olayiwola (1990) indicated that the average trip lengths to health facilities in the area were 2.60km and 2.78km, to dispensaries and health centres respectively. From the submission of Olajuyin et al. (1997), a more recent study in Irewole LGA of Osun State, revealed that average trip lengths to dispensary, maternity and hospital were 4.9km, 6.8km and 11.5km accordingly. Indeed, these distances might be too far for an average or a poor patient to patronise. Other similar contributions in the regard of trip lengths to health facilities were made by Olayiwola (1990), Onakerhoraye (1991) and Adeagbo (1998).

A study on rural health care strategy in El Salvadors by Lewis et al. (1999) revealed that a worst-off rural household in El-Salvadors travelled 12 km to utilise health facilities. They further remarked that physical access was not seen as a big problem but poor roads were identified as responsible for limiting access to higher-level health facilities. Is road not a component of physical access? Since poor road is a component of physical access, then the remark by Lewis et. al. (1999) can be regarded as an overstatement. Fajemisan (1988) also has earlier identified lack of good roads in Kajola LGA in Oyo State, Nigeria, as a factor that adversely affected the patronage of the expanded program of immunization by the community.

Personal accessibility measurement does not only include some of the attributes of locational accessibility (such as distance and road conditions) but also connotes the effects of constraints of movement (such as mode, travel time, waiting time and cost of travel in cash) on the individuals or groups concerned. While Okafor (1984) used only four accessibility variables (that is, ratio of LGA population to general hospitals, household travelling more than 8km to general hospital, percentage of income spent on health care, and transport cost to general hospital), Olujimi (2003) utilised six accessibility variables to determine personal accessibility of rural dwellers to av.ailable health facilities in Owo region of Ondo State, Nigeria. The six accessibility variables are household travelling more than 5km of health facilities, travel time to health facilities, condition of roads linking health facilities, travel cost (in cash) to health facilities, waiting time to receive health care services and percentage of household income spent on health care.

However, the ratio of LGA population to health facilities was not used as accessibility variable because the study did not focus on only one single health facility (such as general hospital) as demonstrated by Okafor (1984), but focused on all available health facilities in the region. This was very important because the rural dwellers needed to enjoy health care facilities that were basic to the implementation of primary health care program in Nigeria.

2.4.8 The management of health care facilities

The primary aim of facility planning and management is to develop and maintain facilities that are safe, comfortable and enjoyable and that promote individual and organizational effectiveness. According to Berdamous (1998), management was necessary to direct the objectives. Without the input of the managers, the resources of the enterprise would not be channelled to their proper destination, effective health care delivery. In particular, certainly in a market economy, a business will not be able to attain its profit objective unless it has the right kind of management.

A strong form of decentralization is found when representatives from users' groups can form the management bodies for local health institutions such as hospitals or health facilities. According to the World Bank (1994), `community involvement in the management of health facilities was emerging as an important aspect of district-based health systems in many African countries. Decentralisation of this kind may combine the management of services with the organisation of productive activities, and the exercise of influence on planners and decision-makers, responsible for the allocation of resources. It may also include accountability to the community or groups of beneficiaries from among whom the Board members are drawn.

WHO (1993) referred to this as a method for `promoting greater responsiveness to consumer preferences. However, such boards can develop long-term plans, monitor the quality of care, appoint, pay and assess the staff, assess the adequacy of resources, recommend fee levels and determine criteria for exemptions, purchase drugs and equipment, develop channels of communication with users, and organise health education. It is also possible to insert some of the properties of market forces into the relationships between parts of the health care system. Hospitals and other community facilities can be allowed to sell their services to purchasers within the system, family doctors for example, using government grants to purchase primary and secondary health care for their patients, and manage their facilities with considerable autonomy (Lacey, 1999).

This form of decentralisation is illustrated by community involvement in Senegal on the committees set up to manage health care facilities -health huts,

posts and healt centres. The committee's selected community health workers, financed their training and provided their salaries, managed receipts from fees, and purchased drugs (N'Diaye, 1990). This kind of participation in the management of district health facilities through community management committees has been found to improve performance by strengthening the accountability of health providers to patients. The involvement of diverse groups based on kinship, ethnicity or culture facilitates the expression of grievances and collaboration in problem-solving. Participation encourages a sense of ownership of, and support for, ways of solving local health problems. Empathy and trust between health care providers and their patients are encouraged (World Bank, 1994).

Self-managing bodies can also be a way of involving hitherto excluded sections of the community in decision-making and implementation, empowering them by increasing their knowledge and status. This was clearly seen in the Berawan village of Long Jegan in Sarawak in which women formed a health committee to manage a kindergarten and children's feeding program, having first identified child health as their top priority. An increase in the capabilities and self-reliance of village women resulted as organisational skills developed. Their prestige in the community grew as their pre-existing capabilities in child care were recognised and acknowledged (Wong & Chen, 1991).

Experience also suggests that discussions of health costs by managing committees not only contribute to a more cost-defined level of provision and utilization of health care, but also encourage efforts to find health-promoting alternatives such as water supplies and diets (Kasongo Project Team, 1984). Power politics will be present, whatever the organizational form chosen. As in Senegal, health committees can fall prey to political party factions, which lead to health care management problems, with political factions yet taking second place to personal quarrels (N'Diaye, 1990). This is a risk with whatever method of recruitment to office that is used. India's Community Health Volunteers were selected by doctors in the primary health centres from among candidates nominated by the community. This did not prevent party politicians and elected representatives from intervening in, politicising and, in some cases, controlling the selection (backed

by sanctions against doctors such as threats of transfer) in order to penetrate village life, reinforce a local client's obligations, or secure the dominance of a political faction (Jobert, 1985).

All forms of participation are capable of intensifying social and political conflict. Participation is widely recognised as a problem in poor countries because of political inequality and dependency, illiteracy, poverty, poor communications, physical insecurity, professional and bureaucratic hostility, political centralization and tokenism. Communities are not socially homogenous and the greater the inequality the more difficult participation in administrations, including, health care delivery, is likely to be. Programs aimed at strengthening the position of the poor may exacerbate conflicts among the local and national elites, who may have to be co-opted before a program can run successfully.

Community leaders do not always act to the benefit of all. The early phases of committee management of health centres in Kisantu, Zaire, between 1979 and 1981, found members seeking privileges and recognition from participation. Only later did they get down to managing health care delivery (Lamboray & Laing, 1984). Government planners and community workers do not necessarily share the same goals (Rifkin, 1986a). Without doubt, the most serious mistake any reformer can make is to assume decentralisation to be a managerial exercise devoid of political cause and consequence.

In a study conducted in Ondo State in Nigeria, management reforms was carried out which involved the extensive renovation and upgrading of existing facilities to ensure an improvement of accessibility to the health services in all the local governments of the state (NAS, 2009). This did not address the planning and management of health facilities, in totality, in the rural area of the state. Similarly in Lagos State, management reform was considered necessary within the state health sector. Fundamentally, there were widespread management lapses identified in the State in the area of health care delivery.

Furthermore, studies have shown that the linear programming is an important aspect of planning in the production management. For instance, Sommer (1981) used fuzzy dynamic programming to solve a real-world inventory and production scheduling

problem. Linguistic statement such as "the stock should be at best zero at the end of the planning horizon and diminish production capacity as continuously as possible" described management's fuzzy aspiration for inventory and production capacity as possible reduction in a planned withdrawal from a market. Fuzzy dynamic programming was used to determine the optimal inventory and production levels.

Fuzzy set theory has been applied to problems in inventory management and production and process plan selection. The appeal of using fuzzy set theory in these production management problems equals that of aggregate planning. Inventory management requires demand forecast as well as parameters for inventory-related costs such as carrying, replenishment, shortages and backorders. Precise estimate of each of these model attributes is often difficult. Similarly, in the production and process plan selection, problems of imprecision exist in specifying demand forecast, inventory and processing cost parameters, processing times and routing preference.

2.4.9 Health care planning and management in the rural area

On existing literature on the possible ways to improve health care services in rural areas, it was observed that while there is abundant literature on making health care programs integrated, interdisciplinary and managed in order to reduce fragmentation and facilitate continuity and coordination of care, only some parts of this related to rural issues. An added challenge is the lack of a generally accepted international definition of rurality, which makes it difficult to generalise the definition over different regions and to develop an evidence-based understanding of rural health care. In reviewing the literature on health care, it was found that the development of new forms of interaction was particularly relevant in rural regions. Included in the new forms of interaction were interdisciplinary and team-based work with flexibility of roles and responsibilities, delegation of tasks and cultural adjustments. In addition, programs such as integrated and managed care pathways, outreach programs, shared care and telemedicine were relevant initiatives. These might be associated with greater equity in access to health care and more coherent services with greater continuity, but they were not necessarily linked to reduced costs. They might, in some cases, entail additional

expenses. Such endeavours were, to a large degree, dependent on a well- functioning primary health care system as a base.

Health care providers in rural areas face challenges in providing coherent and integrated services. A growing political trend in planning health services for rural and remote populations, is to take rurality into account in order to ensure greater equity in health services and health outcomes (UKDH, 2003). Rural health research is flourishing, especially in the United Kingdom, Australia and North America, but findings from these areas may not be transferable to the geography and demography of other regions or continents, such as Africa or Asia (BMA, 2003). A special challenge in rural areas is that the proportion of older people is often higher than that of the general population. As a consequence, rural health practitioners often have to deal with older patients with multiple and chronic diseases. In addition, unfavourable health outcomes were linked to rural populations, such as higher asthma mortality rates and a more advanced stage at diagnosis of some cancers (Hjortdahl, 2007).

According to PHAC (2002), there was a lack of internationally agreed-upon definitions of what rurality entailed, how it was measured, and how it was used in research and health care policy and planning. Researchers have usually employed their own definitions in accordance with their study areas of interest. This makes it difficult to interpret and compare international study results and to establish an evidence base for these issues (EURIPA, 1999). In this vein, the Organization for Economic Co-operation and Development (OECD) established that the definitions of rurality were fewer than 150 persons per km. In the UK , for instance, authorities recently developed a methodology to define rural and urban areas which is now being used as national statistic. Another initiative to describe and delineate rurality is the 'Clinical peripherality index' generated by Scotland Health Service (SHS, 2007). The index reflected characteristics of rural, remote general practices and the communities they served, including the communities' access to secondary care facilities, to centers of decision-making and to professional education and support.

2.4.10 Trends in the rural health strategy and policy document

Health policy documents, in many countries, have focused on the need for integrated, continuous and decentralised health services, but many have failed to take into account the special context of rurality. According to BMA (2007), rurality would increasingly be recognised as an issue worthy of its own health policies. Similarly, UKDH (2003) submitted that health care in a rural setting was a policy update on rurality, health care delivery to local areas, acute and emergency services, local provision of facilities for disabled people, interprofessional work and education, and expert patient programs. According to Hjortdarl (2007), the available health services in rural Scotland revealed poor access to public services as one of the main causes of social exclusion for the rural areas. By inference, the loss of local health services can have a significant knock-on effect on the survival of fragile local communities, and on recruitment and retention of health care professionals in both remote and rural areas, thus becoming particularly challenging.

A report from Northern Norway on the rural dimensions in decentralisation of health services recommended the use of outreach/ambulatory services, community hospitals, enhanced use of telemedicine solutions and better counselling and guidance from specialists to primary care workers (Nord, 2005). A key impression gained from this review is that there was a growing emphasis on the rural dimensions in health planning. The emphasis called for a shift of services from secondary care to community-based care, and from community-based to home-based care, or self-management program.

Chapman et al. (2004) observed that greater flexibility in traditional professional roles and responsibilities, such as nurse practitioners or community pharmacists managing common health problems, was proposed in order to alleviate a scarcity of personnel and resources. Empowering primary care practitioners by training and education, combined with support and supervision was prescribed in studies dealing with diabetes and mental health (Madigan, 2004). Another noted example included generalist providers, particularly community and home-care nurses, playing a greater role in the delivery of primary palliative care. Primary health care professionals might also substitute secondary health care in hospitals' acute and emergency departments,

asserted by Roberts et al (1998).

Substitution of health personnel with lay health workers or para-professionals, often in combination with interdisciplinary teams, is among the measures proposed to alleviate staff shortage and to overcome cultural barriers. For instance, Wakerman (2004) observed that working in health promotion and self-management programs may assist in bridging culture, language and patterns of health behaviour in underserved populations. Meanwhile, the working conditions in remote areas are characterised by: geographical, professional and, often, social isolation of practitioners; a strong multidisciplinary approach; overlapping and changing roles of team members; a high degree of general practitioners substitution; and practitioners requiring public health, emergency and extended clinical skills. It was further revealed that working in remote and rural areas called for flexibility of roles and responsibilities, delegation of tasks, and cultural adjustments by the health care practitioners (Hjortdahl, 2007).

With regard to integrated health care, it implies coordinated programs in all phases of medical care. Much of the focus on patient pathways has been related to clinical pathways in hospital settings, or to the gate-keeping and case-management mechanisms used by managed care organisations (NLH, 2007). But Marindo et al. (2007) submitted that a broader approach was emerging, where ICP were multi-professional documents designed to embed in everyday use locally accepted, evidence-based and patient-centerd guidelines for the individual patients. A design for implementing integrated pathways into rural health services implies identifying patient pathways for patient groups and the planning of multidisciplinary, comprehensive health care on a timescale, not only for those needing isolated episodes of care, but also for chronically ill patients (Ouwen et al., 2007).

An analysis of systematic reviews carried out in the Netherlands evaluating the effectiveness, definitions and components of integrated health care programs for chronically ill patients found that such integrated care programs appeared to have positive effects on the quality of care. Both integrated patient health care and managed health care are intended to improve access, continuity and coordination of care (Philips et al., 2006). But the managed care also takes into account payment and economic elements, and the cost-effectiveness of care. One definition of managed care,

according to Mnet (2007), was any system that managed health care delivery with the aim of controlling costs. Managed care systems typically rely on a primary health care physician who acts as a gatekeeper through whom the patient has to go to obtain other health services, such as specialty medical care, surgery, or physical therapy.

Kelly and Maclean (1997) proposed that rural case management depended on a locally based case manager, rather than a regular case manager who travelled to rural areas from an urban center. This was illustrated in a US study describing the nurse's role as case manager in rural settings. The highest ranked essential skills for rural case managers were identified as: the ability to be creative in the coordination of resources, multidimensional nursing skills, excellent communication skills, high calibre computer skills and excellent driving skills.

Staton and Dukin (2002) found the emphasis on technology and telemedicine – that case management in a rural environment required a much broader and generalist knowledge base – to cover all levels of prevention and traverse all age groups. Rural case management is a distinct specialty area of practice, having a distinct knowledge base and skill level; and nurses should be prepared at the advanced practice level. It was revealed that planned health care programs such as the integrated care and managed care must be adjusted to the context of rural areas. The integrated and managed cares also require of rural health professionals special knowledge and skills (Hjortdahl, 2007). Indeed, many of the initiatives to improve health services in rural and remote areas were attempts to better the interaction and communication between primary and specialist health services levels. With the intermediate care describing the expansion of primary health care and social care services to bridge the interface with secondary health care (SEHD, 2007), the Rural Access Action Team of Scotland offered the following definitions:

- The rural general hospital is a locally-based, consultant-led service that provides emergency medical care such as triage, resuscitation and stabilisation. It also provides locally-based elective care, diagnosis, treatment or transfer. It handles care for the elderly and for those with chronic illness such as stroke and diabetes, and support for renal dialysis patients.

- The community hospital varies as to what services are provided, but usually has a core of GP in-patient beds, while some have consultant long-stay beds, primary care nurse beds, or delivery beds run by midwives. Community hospitals may also play a role in palliative care, outpatient functions including day case surgery, specialist clinics and in-telemedicine including teleradiology. In Norway, community hospital functions are often placed in small units with 2 to 3 beds within a nursing home. Others are part of district medical facilities, combining primary health care and specialist outreach services. A recent political trend in Norway is to strengthen such services, mostly in rural areas (Garasen, 2005).

In Scandinavia, GPs are often engaged as advisors to the hospital staff, acting as facilitators of cooperation between generalists and hospitals. They participate in the development of clinical guidelines for shared care and also conduct multidisciplinary patient pathway analyses in order to identify areas of quality improvement (Aaraas, 2000).

One of the most fundamental aspects identified in a literature review (on 'shared care' at the primary-secondary interface) is the need for improved data transfer relating to discharge planning, shared prescribing and shared management of disease. Although information technology may ensure the improved data transfer, a culture change compelling health professionals to share patient information in a more timely and efficient way should be given higher priority (Hampson, 1996).

Specialist outreach clinics in primary care and rural hospitals were studied in a 2004 Cochrane systematic review, providing an assessment of effectiveness in terms of access, quality, health outcomes, patient satisfaction, use of services and costs (Gruen, 2004). Most of the comparative studies covered urban, non-disadvantaged populations in developed countries. As part of more complex multifaceted interventions, involving collaboration with primary care, education or other services, the specialist outreach clinics were associated with improved health outcomes, more efficient and guideline-consistent care, and less use of inpatient services. The additional costs of implementing the outreach might be offset by improved health outcomes; the benefits of

simple outreach models in urban, non-disadvantaged settings appeared to be small, however (Gruen, 2004). Elsewhere, evidence further showed that collaboration at the interface between primary and secondary sectors may improve access, continuity of care and the quality of service delivery in rural areas (Wootton, 2005). These measures are dependent on a well-functioning primary health care system as a base (Hjortdahl, 2007).

Telemedicine is another type of health service facility, used in the rural area. Telemedicine may be defined as 'Medicine practised at a distance'. It, therefore, encompasses diagnosis, treatment and medical education (Journal of Telemedicine, 2007). The benefits of telemedicine involve the facilitation of access to health services and medical information regardless of time and place. In this respect, there is rich literature on telemedicine applications in rural settings. Nonetheless, there is a lack of evidence supporting its clinical and cost advantages relative to traditional services (Wootton, 2005).

Edwards and Patel's (2003) report of well-functioning telemedicine services derived from the state of Maine, USA, where there had been a rapid growth in state-wide telemedicine systems in rural, economically disadvantaged areas. There, telemedicine was used in a broad array of interactive videoconferencing applications, including mental health and psychiatry, diabetes management, primary care, paediatrics, genetics, and dermatology. In the same vein, Dimmick et al. (2003) submitted that an article from Tennessee, USA, described an integrated tele-health network linking three hospitals, a healthcare clinic and patient homes. Outcomes from the disease management program for diabetes showed an increase in the number of diabetic patients who had managed to control their blood glucose levels. In addition, in Scotland, remote nurse practitioners staffed in a community hospital, accident and emergency services were supported by telemedicine advice from a regional hospital using videoconference and a document camera which allowed transmission of still images of wounds and radiographs (Brenner, 2004). Both the professionals and patients reported high levels of acceptance and satisfaction.

In the study, the understanding of rurality relating to health care, suggests some or all of the following elements: isolated and dispersed communities, low density populations, limited public transport and road infrastructure, long distances to hospitals

and health care services, and the difficulties in attracting and recruiting qualified personnel. A study conducted by Magnus (2008) in the rural areas of Owan East and Owan West LGAs of Edo State, Nigeria, showed a gross inadequacy in the provision of health facilities, among others. This was attributed to inadequate planning and management of health care facilities. According to Magnus (2008), investigation into the reasons for the inadequacies indicated that the local governments were not paying much attention to financing primary health care in the study area, Edo State. He stressed further that with adequate financing, better facilities could be provided and many qualified personnel could be employed. Yet, this was unconnected with inadequate planning and management of health facilities.

2.4.11 Impact of health care delivery in the rural area

Rural primary health care physicians and other rural providers have been characterised as overworked, inadequately reimbursed, and lacking sufficient professional support. NRECA (1992) argued that if this characterisation is accurate, rural health care providers might welcome organisation and delivery system changes that improved the circumstances of their practices, thereby creating an impact on the population. For Moscovice (2009), either "horizontal, or top-up" approaches to rural network development could occur under health care reform, depending on the supply of and organizational relationships among existing health professionals in a rural community and the geographic proximity of that community to an urban center or a large rural referral institution. Locally developed horizontal networks can be effective, if they have the necessary leadership and resources to expand the scope of activities of existing providers to meet new responsibilities. Top-down networks, initiated by urban health care organizations, can be effective if they are sensitive to local issues and concerns, and are to identify and support the positive attributes of rural medical practice. If one of the objectives of health reform is to stimulate the widespread development of rural provider networks, rural medical practice is likely to be transformed in a variety of ways.

Nevertheless, in providers' response to increased management and oversight, Moscovice (2009) submitted that most rural providers now have little, if any, experience with managed health care arrangements. Under the proposed health reform initiatives,

including global budgeting, it is likely that rural providers will be required to participate in utilisation management techniques such as preadmission certification for inpatient care, preauthorization view for surgery, physicians profiling, and practice guidelines. The level of oversight imposed by government or health plans on rural providers' individual clinical decisions (and providers' corresponding response to this oversight) is likely to define rural providers' view of health care reform. Under managed competition, health plans and networks may be under strong pressure to micromanage providers to maintain their competitive position.

Brown (1993) contended that regional governments might feel the same pressure in order to stay within budget caps. Yet the goal of these techniques has been described as not to improve the decision-making power of individual providers, but to improve their ability to make better decisions. The degree to which rural providers accept or rebel against the imposition of new utilisation management techniques on their practices, clearly, will be related to the manner in which these techniques are implemented and their perceived value to patients.

A final issue relating to rural medical practice is the impact of network development under health reform on the willingness of providers to move to rural areas and to remain there over time. The central health care issue for many rural communities is not cost; rather it is inadequate and unstable supply of physicians and other providers. For instance, it has been reported that almost 50 percent of rural primary health care physicians in North Carolina left their rural practice setting within three years. Homer et al. (1993) added that physician turnover, as well as inadequate numbers of physicians and other health providers, could hinder the implementation of new or any health care initiatives in rural communities and development of integrated services networks. Isolated rural areas, in particular, will continue to be difficult to serve under any health care reform initiative. It is not clear what incentives can be created by networks to attract physicians or other health professionals to practise in these areas. Many providers who practise in frontier areas are extremely independent and may wish to avoid practising as part of an organised medical system. Their health plans will be faced with the dilemma of

balancing their desire to alter provider practice partners with the impact those alterations might have on providers in underserved rural areas.

Several positive and negative benefits have been derived from the rapid growth of the private health care sector in Nigeria; the most noticeable impact being that the private sector has buffered inadequacies in the provision of public services at all levels of health care. For example, only 40% of the population had access to modern health services in 1985, but this had increased to 65% by 1995 (UNICEF, 1996), partly through the expanded PHC programme, but also, as a result of the continued growth of the private sector. Half of all family planning acceptors also obtained their services from private outlets in 1992 (FOS, 1992). Meanwhile, the private health care sector was believed to have contributed significantly to the doubling immunization coverage (for children, aged ones, and below) between 1980 and 1991. In addition, private hospitals continued to serve as training centers for physicians in the general practice residency, and the private might have surpassed the public health care sector in terms of new investment in medical technology. For instance, inventories for all kinds of equipment were higher in private than public facilities (Denton et al., 1991).

Numerous problems also accompanied this unplanned and uncontrolled expansion of the private health care market. Regional inequalities in the distribution of health services widened. This was as a result of the skewed distribution of private practices. Effective monitoring of providers also proved very difficult, with increasing reports of malpractice (Okpugie, 1997), while intra-sector competition escalated to dimensions that compromised efficiency in delivery of health services. Evidencing this was the crisis in Nigeria's health care system linked, inextricably, to attempts at cartelising private health care earlier in the 1990s. The health care system cartelisation came in the form of new billing guidelines and fee schedules (Guild of Medical Directors, 1992). The initiative was sponsored by a pressure group, comprising proprietors of selected private facilities, most of whom were situated in Lagos (formerly the nation Nigeria's capital, and still the commercial nerve).

Prior to this, medical care prices were set independently by clinics and hospitals, but usually without recourse to standard accounting guidelines. Rate-setting was the exclusive preserve of the proprietor and was guided by what was considered adequate

recovery for services rendered, as well as the customary fee charged by other providers within the locality. Expectedly, wide variations in the prices of services existed across the country. However, there were growing fears within the medical profession that providers were resorting to charging very low fees in order to remain competitive and it was doubtful if health care of good quality could be guaranteed under such circumstances. As Bennett et al. (1994) observed, unethical practices among providers were, particularly, likely, to thrive in such a scenario dominated by solo practitioners.

2.4.12 Public involvement in health facilities management

The term 'public involvement' describes a range of activities concerned with engaging people in various exercises with differing degrees of intensity, depth, and participation in the decision-making process. Lupton et al. (1998) suggested that the concept of public involvement was rather ambiguous as it could be seen as both a means to an end and an end in itself. Lupton et al. identified two broad approaches to public involvement: the democratic and the consumerist. The democratic approach emphasised the need for public involvement in order to maintain a healthy democracy and that the diversity of interests in society should be represented by having people responsible in the political process. The consumerist approach, in contrast, emphasised the importance of an organisation in identifying the preferences of individual consumerism in order to enhance its market competitiveness.

Mullen and Spurgeon (2000) have summarised and set out very clearly the arguments for involving the public:

- As a publicly funded service, the NHS should be answerable to its actual and potential consumers (Donovan & Coast, 1994).
- In order to fulfil their role as 'champion of the people', health authorities must demonstrate that they are capable of consulting widely and tackling difficult resource allocation decisions in a public arena (Heginbotham et al., 1993).
- The public may have different perceptions of issues from clinicians and it is essential that the public voice is heard to avoid a unitary and potentially biased professional view (Heginbotham et al., 1993).

- Appropriate and effective services are more likely to be developed if framed on the basis of needs identified in conjunction with users (NHSE et al., 1998).
- Greater public involvement in resource allocation decisions may lead to a widening consensus about priorities (NHSE et al., 1998).
- As the information relating to clinical effectiveness and outcomes grows, there is a need, both, to inform patients, and to ensure that the information itself reflects the patients' perspective on the benefits of their treatment (NHSE, 1996).

Taking the United Kingdom (UK), for example, until 1974, a formal recognition of the importance of public involvement in the NHS never occurred. Community Health Councils (CHCs) were set up in England and Wales by the UK government to represent the consumers in line with the, then, popular concept of community participation. Set up to represent the interests of the consumers, they had a wide range of responsibilities and had developed in different ways. Commenting, Winkler (1987) stated that "The problem of CHCs was that, while as an 'outside element' they seemed a threat to medical staff and poor administrators, too many of them sought security through close association with senior management rather than challenging conventional practices on the patients' behalves. Some CHCs became and remained a surrogate for health education departments. Some were minor bureaucracies concerned with form and procedures. A few developed into patents' rights organisations and specialised in the provision of hard information on services". According to Rubinstein (1991), however, the Community Heath Councils were in a state of confusion and anxiety about their future role; some wondered whether they had a future at all.

The Tory Government of 1979-1997 followed a policy geared towards what was then called a consumer-led NHS (Secretary of State for Health, 1989a; Secretary of State for Health, 1989b; Department of Health, 1991). Harrison et al. (1992), notwithstanding, pointed out that the removal of local authority representation from the Health Authorities meant that the general public did not have anyone to articulate and give voice to their needs. The Health Authorities were seen as being governed by a small group of managers and non-executive members (nominated by the government), many of whom came from business backgrounds. The Conservative government developed an initiative called

'Local Voices' (Department of Health, 1999). The Local Voices had an objective to increase the involvement of local people in purchasing activities in an effort to give Health Authorities more legitimacy.

Previously, attempts had been made to standardise and establish good practice for public involvement. The NHS Benchmarking Club (2001) had a number of members and undertook a survey of what was happening in the Health Authorities, across the United Kingdom. Minimum standards and good practice were identified each year. Clarke (2000) identified a number of examples of public involvement drawing on specific examples nominated for the Institute for Public Policy Research's Public Involvement Awards. There appeared to be a great deal of information already available to show how services could be improved for people from the ethnic minorities. McIver (1994) also identified four priority areas where ethnic groups or services were concerned: communication, information, diet, and religious and cultural needs.

McIver (1994) further provided a range of methods such as public meeting, focus groups, rapid appraisal, among others that were available, and how these could be tailored to suit people from the ethnic minorities. Followingthis direction, a number of studies have also demonstrated that it is possible to obtain the views of people from ethnic minorities about development projects that affect them (Thorogo, 1989; Silvera, 1992). Therefore, it seems that in order to obtain the views of people from ethnic minority groups, the questions must be relevant and it must be possible to distinguish the responses of different ethnic groups. Likewise, the methods chosen to obtain the views must make it possible for these groups to respond.

Outside the UK, there were a number of examples of public involvement, moreover. In 1996, the City of Vancouver committed itself to improving its public involvement process, involving three phases. The first phase catalogued the hundreds of ways the public is involved in decision-making in Vancouver. The second phase was evaluating those catalogued public involvement processes. And the third phase aimed at improving the city's public involvement approaches and strategies. A final report was completed (City of Vancouver, 1998): it identified that planning and mandating public involvement was the city's greatest weakness, and inefficiency at providing feedback and evaluation once planning and mandating public involvement were effected. The attitude

of some elected and appointed officials after asking for the opinion of the public appeared to argue with it. This tended to defeat the purpose of involving the public, and damaged the credibility of the process. Based on the above-listed strengths and weaknesses, a number of improvements in the overall well-being of the people were identified by Clarke (2000) to improve the process of decision-making.

Generally in Canada, a number of provincial government reports advocated lay participation in health care decisions. In this regard, Charles and DeMaio (1993) contended that patient preferences should be incorporated into decision-making. They also stated the desire to increase public accountability for decisions on the allocation of health care resources so that providers were more accountable to the communities they served. Futhermore, Charles and DeMaio buttressed the need to clearly identify how lay participation could lead to better decision-making.

In New Zealand, there was a determined attempt by the government to consult with consumers and family/carers of consumers about mental health service developments (Noseworthy, 1999). The main aim of the New Zealand government's effort was to improve service responsiveness towards consumer citizens. The government realised that continuous quality improvement should aim at responding to clients/customers' health care needs and that this process must begin with service planning, design and delivery. According to Noseworthy, the implementation of the information derived from the people or users' responses was equally crucial. In the country, New Zealand, there was a Health Funding Authority (HFA) that purchased health services and it was used to translate family/consumer involvement into action. HFA (2000) noted that a complaint was that health care decisions were made before consumer and family advisers were ever consulted.

Public involvement is recognised by the World Health Organisation as an important concept. It is called by various names such as community involvement, and has been used to reform the traditional forms of top-down development practice (Kahssay & Oakley, 1999), giving rise to more participatory development. This stresses the importance of involving local people in the development of various programs and that it must be systematically developed on the basis of a clear methodology. This contrasts very clearly with previous models which stressed external delivery, physical or tangible

improvements and the employment of professionals to design and direct development programs and projects.

There is evidence that the inclusion of the public in planning health care services did improve the quality of health care delivery (Ham, 1980). Elsewhere, it was agreed that public involvement had the potential to improve the relevance and impact of research and the quality of subsequent health services (Entwhistle et al., 1998). However, traditional methods for encouraging public involvement – such as public meetings, patient participation groups and complaints procedures – meet with limited success (Gillam & Murray, 1996). Murray (1999) argued that the public involvement process was concerned only with a restricted set of health services, rather than asking people what they thought would improve their health care. Yet, it was found out that people tended to discuss housing, work, stress, the local general practices and community nursing services rather than prioritise more distant health services.

Public involvement is needed in a democratic society and decisions about health care should also be part of a democratisation business. It does portend that meaningful or reliable data can be gathered from the people on specific decisions and its purpose must be very clear. The information so garnered will reveal how the results of public involvement might influence the decision-making. There can be conflict between the views of the public and the health care professionals, consequently. Often, the possible disagreement has been used as an excuse to avoid or undervalue public involvement in health care delivery decisions (Flynn et al., 1996). That the public becomes involved may constitute a threat to the health care professionals, creating the feeling of a loss of power in them. Health service charges may also be driven by other agenda. The central government does not in its policy address the needs of individual health service users. While McIver (1993) made the point that professionals should never assume that they knew what users considered to be important, Heinville & Courtney (1979) recognised and admitted, after ten years of consultation exercises with the general public, that there was no easy solution. Measurements are tailored to fit the application to which they are put. Questions must be as closely linked as possible to the way answers will be used. In their own view, Sergeant and Steele (1998) concluded that public involvement itself was unlikely to transform public services; however, over a long period the development of

public involvement would enhance the decision-making of an organisation and help to change its internal culture.

From the foregoing review, it can be concluded that all the various development programs and policies in Nigeria and other foreign countries on health only focused on the financial criteria for enhancing health care delivery. The 'free health for all' program that was adopted in Nigeria in the second republic only involved the supply of drugs and other few medical equipments. The dependence on existing health facilities still played a major role in that period while effort was concentrated in the urban area of Ondo State to the utter neglect of the rural area. Also, information on planning and management of available health facilities appeared inadequate. Thus, the study focuses on the analyses of the effect of planning and management of health facilities in the rural area of Ondo State.

2.4.13 Measurement of health service delivery

Service delivery can be defined as a way inputs are combined to allow the delivery of services of interventions or health actions (WHO, 2001a). Service delivery is the main function health system has to perform, and it is often thought of as the only function of a health system. Service delivery is an immediate output of the input building blocks such as health workforce, medical products and finances (Islam, 2007). According to WHO (2007), the measurement of service delivery had a more ambiguous scope, partly due to less quantifiable nature of service delivery. This can be explained by lack of reliable data, which were not often factored into many indicators (USAID, 2009). The reasons attributed to this paucity of data is that, while a multitude of indicators were tools existing to measure various aspects of health system performance, there is, hardly, any consensus on a core set of indicators that are measured across programs and countries. Furthermore, investments in monitoring health systems' indicators have been inadequate, leading to a sketchy information base (USAID, 2009). Meanwhile, WHO (2009) made further efforts to encourage the use of data from facility surveys to fill gaps in information on health resources, including infrastructures, workforce and service delivery, in many developing countries, especially. By so doing, a comprehensive picture of health systems in the context of service status and availability of services is provided.

A review by DFID suggested that an indicator should perform well on dimensions such as data availability, comparability, and ability to collect with accuracy and independence (reliability) relevant data to health systems' performance, in association with final outcome indicators, possibility of aggregation with other indicators, and likelihood that it will distort behaviour negatively (Walford, 2007). Hutton (2000) articulated, in a review of top criteria for assessing indicators, and identified validity, relevance, precision (accuracy), reliability, sensitivity, timeliness, and cost as well as the ability to quantify the measure, interpret it, without modification, and collect it often enough to have statistical power. Yet, USAID (2009) asserted that there was no one model of good service delivery, which allowed for many variations in different communities.

However, WHO (2007) defined a list of requirements that service delivery system must meet. Efforts must be made to increase: the demand for health care through public health outreach, a package of integrated health services that was offered based on need and availability, organised provider network, effective management, and an increase in the infrastructure and logistical control in order to support providers of health care. Moreover, indicators of health service delivery are required to measure these various characteristics, as well as the adequacy of the structure of the service delivery system, while also monitoring indicators of service delivery outputs (Islam, 2007).

WHO (2008) gave an array of measurements of health service delivery outputs. The health service delivery outputs included access, utilisation, and coverage of health services, indicating whether people were receiving the service they needed. Access entailed physical, financial and socio-psychological access to services. Data on the distribution of health services resources among a population were required to estimate physical access. Similarly, estimate of types of services rendered needed to be reported by health facilities. According to WHO (ibid), data about service delivery infrastructure were easier to collect than data about other aspects of service delivery because the service infrastructure were mostly durable, tangible and less mobile.

Acceptability is an area that is often included as a component of the "quality of care" measures in service delivery indicator lists. Acceptability covers variables such as safety, efficiency, and effectiveness as a selected intervention. Due to the constraints in

collecting data on the variables, fewer indicators are available in their regards (WHO, 2008).

There are several indicators that have been used to measure health service delivery. The WHO tool kit on monitoring health system strength included a list of draft indicators (WHO, 2008). The tool kit focused largely on availability and utilisation of health care services among the overall population of a country. WHO (2008) argued that the indicator was limited because of the dynamics in measurement which required a more sophisticated tool in measuring differences in service capacities. The USAID-funded Health System Assessment Approach (HSAA) matched WHO framework on several indicators, but it also integrated greater number of indicators intended for in-country purposes (Islam, 2007).These latter indicators were mainly designed with a view to choosing a smaller set of indicators from the larger list and better match their program activities closely. Lack of reliable data resulted in the inclusion of more qualitative indicators in the report; despite the number of other indicators, it did not have one input measure relating to the quality assurance process. Besides, there was a general agreement on the need for quality care indicators, specific to service delivery indicators that existed and were widely used by different organisations.

ECHIM (2008b) used the number of distribution of in-patient beds per 10,000 population, as health service delivery indicator. This health service indicator can serve as a proxy for the availability of health services, where more direct measures are not available. It is measured relative to population size and better represented the adequacy of services available, unlike a measurement of the total number of beds. There is no specific threshold for this indicator. In the same vein, the number and distribution of health facilities per 10,000 (or 1000) population has been mentioned in several other sources, although each had its own variation and measurement. A 2008 literature review cited this measurement in terms of facilities distribution per 1,000 people, not 10,000 (Krik & Freedom, 2008). This was more rudimentary than the first indicator; the distribution per 1,000 people could be more easily measured, although it had few benchmarks.

Measuring basic service capacity is based on the availability of basic amenities, basic equipments, infection control, health workers, and tracer drugs and diagnostics in a facility. Determining basic service capacity is the use of standard minimum equipment

that facilities at each level of health care should have available (Waford, 2007). WHO has also suggested another basic service capacity indicator which is disease-specific, such as malaria control, integrated management of childhood illness, safe motherhood, family planning, HIV/AIDS control, control of other sexually transmitted diseases, TB control, and prevention of non-communicable diseases. These can be individually measured, or measured in some combinations given the type of health care facility being evaluated (USAID, 2009).

Another indicator of health care delivery is the number of outpatient department (OPD) visits per 10,000 people per year (WHO, 2007). In the area of health workforce, fewer indicators' sources deal with health workforce issues. Workforce indicators should cover whether human resources are allocated fairly and efficiently and whether allocation is responsive to change (WHO, 2007). Also, the WHO tool kit and HMN publications emphasised health information system (HIS) performance. A proposed HIS performance index consisted of 29 individual measurements. Other indicators have required simple qualitative assessments and yes/no answers, among which were the existence of reports or certain institutional responsibility (USAID, 2009).

The indicators that measure access to medicines among the WHO indicators are constructed around the Millenium Development Goals (MDGs) indicator of "Proportion of population with access to affordable essential drugs in developing countries on a sustainable basis" (United Nations, 2008; Islam, 2007; SWEF Research Network, 2003). Health care financing is covered by a relatively smaller number of indicators; and WHO has proposed three of them. Two of these WHO three indicators cover the total health expenditure per capital and general government health expenditure as a proportion of total health expenditure; these are well established and reported annually by the international organisation (USAID, 2009). Leadership (Stewardship) is another indicator of the health care delivery performance. The health care delivery policy index consists of 10 components that are qualitative and relatively easy to access and report as yes/no answers (USAID, 2009; PAHO, 2008; WHO/EMRO 2007; Siddqi, 2008).

Generally, a major consideration about quality of health care delivery is a need to adopt the indicators in the context of evidence-based guidelines. Not only are these indicators not widely collected as the result, some indicators are also very subjective and

poor collection can result in non-comparability, or useless data, yet (USAID, 2009). Furthermore, only little data on newly emerging diseases may be available, or when available they are limited to endemic areas. Therefore, for all the health care delivery indicators, a major stumbling block will be to get data from not only public health facilities but also the private.

Notwithstanding, these array of indicators have one limitation or the other. There has been no agreeable submission on which indicator is the best, the study that use the quality of health status as a proxy for health service delivery (quality of HIS (Natural, mortality ratio, USMR) as used by World Health Organization in 2008 (USAID, 2009). Health status is used as a surrogate for health service delivery. It can also be assessed as the percentage of disease surveillance reports received at the national level from districts compared to the number of reports expected. Bagner (1985) corroborated that comprehensive health status measures can and should be incorporated into assessment of clinical treatment, health service delivery and health service planning.

2.4.14 Measurement of health status

Health status is a broad concept, and many issues complicate its definition and measurement. Advances in the methods used to measure health status have grown during the past decade, although more may be needed (John et al., 1981). Health status can be defined as the dynamic equilibrium of individual or group of people with their environment, reflecting their capacity to live physically, mentally and socially (Breslow, 1989). The purpose of measuring heath status is to compare that of one individual or group with that of another or to compare the health status of an individual or group at one time. The analysis coupled with observations of possible factors affecting health status can lead to the derivation and judgment of hypothesis concerning what influences health. A second purpose of health measurement is to evaluate deliberate attempts to sustain or improve health, for example, through medical care, environmental measures, or behaviour effort (Breslow, 1989).

Traditional measures of health have, for the most part, been based on biological indicators, reflecting the three D's – death, disease and disability – and target biological bull's eye. The traditional measures tend to be disease-specific; tend to make sense to

physicians involved in health care delivery; and tend to be useful for grossly assessing the health of populations (Green Field & Nelson, 1992). Notwithstanding, traditional measures are increasingly seen to be insufficient by themselves, because they fail to encompass the other dimensions of health and are not universally relevant to all patients with given diseases or problems (Greenfield & Nelson, 1992).

The major problem in developing health status indices is a conceptualisation of health that can be operationalised (Bergner, 1998). The issue about health status measurement is the aggregation of all health measures into a single index which can be valuable in two ways. Health status measurement will provide a single number for comparison across time and among groups. The measurement also will provide information needed to examine the components of the index so as to pair them to their essentials (Bergner, 1985).

According to Breslow (1989), measurement of health status could take several forms. One form consisted of objective, physical or psychological test administered to individuals. This approach would get at the capacity for responding to environmental situations through probing of a person's physiological reserves or capabilities. The second form or approach to health status measurement consisted of determining the competence for social functioning. This might be determined by self-reported questionnaire or by observations. Such obtained information would permit judging role performance, fulfilling the social expectations that were established in and by one's culture. A third form of health status measurement used self-perception of health – for example, asking whether one's health is excellent, good, fair, or poor. This third approach to the measurement of health status was entirely subjective and global. Although the method has been sceptically treated by many scholars in the scientific community, it has proved to be a very powerful predictor of longevity (Kaplan, 1982; 1983). From the analysis above, the approaches to health status measurement can be seen in two broad ways: the objective and the subjective (David et al., 2007).

Meanwhile, many different health status measures are available, including both generic and disease-specific psychometric measures (Dennis, 1992). The SIP is a well established, standardised questionnaire that indicated changes in a person's behaviour due to sickness (Bagner et al., 2000). The SIP consists of 136 items grouped into 12

categories: ambulation, morbidity, body care and movement, social interaction, alertness behaviour, emotional behaviour, communication, among others. An overall score for the entire instruments can also be calculated. The SIP measures performance of specific behaviours, rather than judging capacity and assessing dysfunctions in health status without a positive formulation of health. It has been extensively studied in populations of patients with back pain and other musculo-skeletal conditions (Beaton et al., 1996; Beaton et al., 1997; Dayo, 1986; Folik, 1985; Stratford, 1993).

Nottingham Health Profile (NHP) is another method based on a brief self-administered questionnaire originally designed for use in primary health care settings (Hunt, 1985). It consists of 38 items that are grouped into six dimensions. The NHP questions use a dichotomous Yes/No response which is similar to SIP but asks more directly about feelings or emotional states than about behavioural changes (Jon, 2000). Also, the Duke Health Profile (DHP) is a revised and shortened version of the Duke University of North Carolina health profile and is designed for use in primary health care settings (Pakerson et al., 1990). The DHP consisted of 17 questions that are grouped into six health scores and four dysfunction scores. Responses to statements and questions are rated on three-point scale (Jon, 2000).

There are also the COOP/WONCA charts. The COOP/WONCA charts consist of six single-item scales, including physical fitness, daily or usual activities, social activities, overall health and change in health. Questions such as ‘during the past two weeks?’ and ‘how would you rate your health in general are rated on a five-point scale of number 1 to 5, specifically entailing verbal descriptor rating (excellent down to poor) and illustrations rating (smiling face down to bad frowning face) (Jon, 2000). Jon (2000) further claimed that both the SIP and NHP were long, and this was one of the major disadvantages of the health status measurement approaches. Meanwhile, DHP and the COOP/WONCA charts have a strong advantage in brevity. Practically, health status, as submitted by Deyo (1998), should be as brief as possible, to minimise the burden to respondents and the cost of data collection and management.

2.4.15.0. Indicators of health status measurement

Health status can be measured by many indicators such as mortality; morbidity; functional limitations, which are distinct from mortality indicators since they measure both quality of life and vital status (Sandy, 2008). According to the medical or biological model, health status could be evaluated by diagnosed or reported diseases and information coming from clinical physiological or psychiatric examination.

Some recent studies are interested in reporting biases related to self-assessed health, because it is the most regularly collected measurement of health in household surveys. Even, if this indicator is a good predictor of mortality (Idler & Benyamini, 1997) and health care utilisation (Desalvo et al., 2005), it is also the result of a complex aggregation process of several elements that an individual knows on his health status. Initially, according to Sandy (2008), self-assessed health-integrated morbidity which depended not only on diseases and on functional limitations for which it was treated, but also on diagnosed health problems, and, therefore, on interactions with health professionals. This measurement, being subjective, also integrated personal expectations and good health which were influenced by social and cultural environments.

Several studies have highlighted discordance between health perception and other health indicators that were considered to be more objective. The literature underlined four sets of factors that could affect individual health judgment, and by implication, self-assessed health. The four sets of factors included subjective health indicators. Self-assessed health indicator of Mini European Health Module (MEHM) was identified as a subjective health indicator. Another subjective health indicator was built starting from SF to 36 General Health (GH) scores. These scores were dichotomised with the first quartile of individuals having a poor GH score opposed to those having a better GH score. One of the two indicators of chronic diseases came from the MEHM, with the question: 'Do you have any longstanding illness or longstanding health problem?' The other chronic diseases indicator used the extended report of diseases from 2002-2003 National Health Survey (NHS), coded according to the international classification of diseases (ICD, 10th version) by WHO (Sandy, 2008).

The social scientists (economists, in particular), according to David et al. (2007) have relied heavily on self-reported measures of General Health Status and, to a lesser

extent, self-reported chronic conditions. One of the main factors that are used to justify the use of such measures is that self-reported health is a significant predictor of future functioning and mortality within countries (Idler & Angel, 1990; Idler & Kasl, 1995; Idler & Benysminim, 1997; Van Doorshlaer & Gerdtham, 2003; Frijters et al., 2005b). Recent studies using self-reported measures revealed that it was prone to error (Adams et al., 2003; Meer et al., 2003; Contoyannis et al., 2004). However, if such self-reported measures suffer from much reporting errors, there would be implications for the literature. It is widely held that individuals can consciously mis-report their health status if they are given clear financial incentives to do so (David et al., 2007). For example, where receipt of welfare payments is conditional on health status, the individuals have incentives to report their disability or extent of it to be worse than it really is.

According to Baker et al. (2004), there were two main approaches used to tackle this potential health status measurement problem. One was to purge reporting error that characterised self-reported general health status by using other health measurement approach typically available in survey data, which were still self-reported but seen to be more objective. Commonest were the self-reported chronic health measurement, and this examined the extent of any reporting heterogeneity. Lideboom & Var Doorshaer (2004) found some reports biased by age and gender.

However, David et al. (2007) observed that the objective health status measurement was also subjected to reporting error. Baker et al. (2004) noted that survey conducted in Canada, where a wide range of self-reported chronic health conditions, were matched with records of public health care usage, were inundated with a large amount of systematic reporting error; consequently, large alienation biases were used as explanatory variables. In general, self-reported chronic diseases have been extensively used for health status measurement (Bourne, 2009; David et al., 2007; Jeffery, 2005).

2.4.16.0. Models used in health status measurement

The use of multivariate analysis in the study of health and subjective well-being (self-reported health or happiness) has become virtually a norm (Crossman, 1972; Smith & Kugton, 1997; DiTella et al., 1998; Blauchflower & Oswald, 2004). The use of multivarariate analysis was particularly adopted in Jamaica and Babados (Bourne, 2008a,

2008b; Bourne & McGrowder, 2009; Hutchinson et al., 2005). Bourne submitted that the use of multivariate study of health and health-seeking behaviour was better than bivariate analysis as many variables could be tested simultaneously for their impact on dependent variables, if there were any.

Scholars have both used and argued that self-reported health status measurement approach can be used to evaluate health status instead of objective health status measurement (Grossman, 1972; Smith & Kington, 1997; Hambleton et al., 2005); Kashdan, 2004; Yi & Vaupel, 2002; Orley, 1995; Diener, 1984, 2000). Similarly, the World Health Organisation (WHO) piloted a work in 100 questions on quality of life survey referred to as WHOUOL. Other scholars, on the other hand, employed self-reported health conditions to operationalise health of individuals (Bourne & McCroder, 2009). In the work of the latter scholars, there were similarity between the self-reported health status and self-reported dysfunctions in assessing health. Bourne (2009), moreover, utilised self-reported health status and self-reported dysfunctions as correlated variables (Equation 1) as well as the modes of general self-reported illnesses (Equation 2), health-seeking behaviour of Jamaicans (Equation 3) and to evaluate the predictors of self-reported health status of Jamaican (Equation 4). Bourne's evaluation was defined as follows:

$I_t = F(H_t)$ where I is self-reported dysfunction (illness) is a function of current health statues H_t…(Equation 1).

$I_t = F(A_1, G_1, HH_1, R_1, H_t, InLI_1, InC, InD_1, ED_1, MR_1, S_1, H1, InY, E_1)$…(Equation 2).

Where I_t (i.e. self-reported illness in current +ve t) is a function of age of respondents.

A_1…. InY are demographic variables and E_1 error item or residual error).

$Mt = F(A_1, G_1, HH, H_t, InL1_1, InD_1, ED_1, MR_1, S_1, H1_1, E_1)$…(Equation 3)

Where M_t is the health-seeking behaviour in current time t, t is a function of age of respondents, and the other variables were previously stated.

$H_t = F(A, G, HH_1, AR_1, M_t, InL1_1, InC, InD, ED, MR, S_1, H1_1, J_t E_1)$…(Equation 4).

From existing body of knowledge, a lot of studies have been conducted in the area of Health care facility. This ranges from spatial inequalities in the health service distribution (Iyun, 1989) to household health facility provisions, bactariology and itiology

(RDMS, 1996), and patronage pattern (Olujimi, 2003) among others, both in the rural area as well as urban area without a recouse to planning and management of the health facilities, in Ondo State. There was an identified gap in the area of physical planning and management of health care facilities in the State. These two issues remain the key reasons for embarking on the study. In addition, measurement of health status has been a major point of discourse among various scholars in the health care sector. Going by the array of methods that have used overtime, the study employs the self-reported health status and dysfunction (as reported cases of illnesses for the past two weeks as at the time of the study), adopting the Equation 2 beacuse of its relevance in addressing the illiteracy level in the rural area.

CHAPTER THREE
RESEARCH METHODOLOGY

3.0 Introduction

The term "methodology" is used for studies which are performed to provide information on the feasibility or accuracy of a research method (Araoye, 2003). It, therefore embraces the procedures and processes involved in data gathering, processing, analysing and presentation. Specifically, the research methodology of this study is designed to obtain data for the evaluation of the impact of planning and management of orthodox health care facilities in the rural area of Ondo State. In order to achieve this, data were collected on the types, distributional pattern, patronage, location accessibility, and quality, regarding the planning and management of rural health facilities.

3.1 Types and Sources of Data

Primary and secondary types of data were collected for this study. Primary data that were collected included household characteristics and variables that are relevant to the evaluation of the impact of health facilities and the overall development of health care delivery in Ondo State. On the other hand, the secondary data were collected for the purpose of literature review, as well, to provide background to the study.

3.1.1 Primary Sources

The research involved the use of both qualitative and quantitative data. Various sources of primary data have been used by researchers, such as record analysis; observation, structured interview, the use of diaries (qualitative), in-depth interviews, key informant interview, focus group discussion, group interview, participant observation, case history and narratives, role-playing, among others. In this study, the qualitative data used were obtained through in-depth interviews (IDI) and Focus Group Discussion (FGD) which were organized in the study area, in Ondo State. The choices of data sources were informed by the fact that they allow for flexibility in obtaining information from illiterate communities. Employing the two sources, options that might not be

revealed in questionnaire could be discovered. The groups listed for the FGD were the farmers, transporters, marketers and the youths who represent the cross-section of the rural dwellers and these were drawn from the three sampled local government areas (LGAs). The groups were chosen because their views were critical to the overall success of this study.

The quantitative data for the study were collected through the use of prepared and pre-tested set of questionnaires. This gave room for objective responses from the respondents. Using this method, three sets of questionnaires were used. The first set which was tagged questionnaire for the target respondents (i.e rural dwellers) was served on the residents (that is, households) of the three selected local government areas of the study (see appendix 1). It was designed to elicit information on socio-economic or personal characteristics of the respondents, awareness of health facilities as well as its patronage, qualities of service rendered by various categories of health facilities, accessibility, as well as principles and impact of planning and management of the facilities in the LGAs.

The second set of questionnaire was designed for the operators of the health facilities. It was tagged questionnaire for the rural health facility operators and service providers (see appendix ii). The sampled operators were mainly the workers of public and private health facilities or centers. The specific questions that were asked the respondents included the characteristics of health variables, as contained in the Health Facilities Census (HFC) Guideline for Survey. Actually, the survey guideline was developed by the Japanese International Cooperation Agency (JICA), and it was employed in assessing the status of physical assets in the health sector. The guideline did yield information useable for policy, planning and management of health systems development. Those variables it tested were availability and condition of physical infrastructure (health facilities, building, utility, communication and transportation); location of health services; delivery points (health facilities and outreach points); availability and condition of equipment; availability of health services; and head counts of health workers, which were viewed under planning and management principles.The third set of questionnaire was designed in form of schedule of inventory of health facility (see appendix iii) that explored data on existing health facilities, both in the selected local government areas of the study as well

as Ondo State, in general. The data included the total number of each category of health facilities available: available infrastructure in the health facilities, information on health indicators, annual budgetary allocation to health sector in the past five years, and information on health programs for over the years as they had affected planning and management of health care facilities.

Furthermore, other facilities obtainable, which were not in the list, were included by updating – using Global Positioning System (GPs) and ARCview GIS software to ascertain their locations – in order to ensure that the selected health facilities reflected the true characteristics of the study areas, and the LGAs. The health facilities were classified into types based on statutory functions and types of ownership. In order to ensure adequate spread of selected health facilities among the types, all the available health care facilities were picked for the study – both the private and public health facilities. The facilities already closed down were not considered for the survey. The categories of facilities considered for the survey are, thus, listed:

Private Hospital/Clinics

Health Centers

Dispensaries

Maternity

Family planning unit

Market-based Clinics

Health Post

3.1.2 Secondary Data

To complement the data collected from the field study, secondary data were also obtained. The secondary data included a review of published literature relating to the Ondo State health reforms in general and the State's health facilities in particular. This review was supplemented by documentary analysis of published reports, key legal instruments and policy documents. Also, the secondary data involved the analysis of quantitative data from health studies undertaken in Ondo State and other health statistics and data on health services and activities collected by Ondo State Ministry of Health and selected hospitals in the study area of the LGAs.

Other sources of secondary data included the National Population Commission (NPC) population census document (2006) which classified the local government areas into senatorial districts, as well as their settlements. The population census document was used to classify the localities according to the wards as delineated by Ondo State INEC. All the sample sizes and estimates were predicated on the population figures generated from the NPC document. Books, journals, newspapers and periodicals, and other relevant literature, as well as the map of Ondo State, within Nigeria, all, provided part of the secondary data. In particular, the map of Ondo State, showing the senatorial districts, settlements, and the health facilities was procured and used.

3.2 Research and Questionnaire Design

Evaluative research design coupled with research survey was adopted for this study. The evaluative research design and research survey gave room for the selection of alternatives for decision making. Many questions have been raised as to ascertain whether evaluation could be accepted for research design or only evaluation. Conversely, Ofo (2002) submitted that no thorough evaluation could be carried out without a basic research activity, and therefore, it was proper to clarify evaluation as a type of research providing alternative information for decision-making. For survey research design, it helps to clearly specify who and what are to be measured?

In respect of questionnaire design, the researcher, in this study, adopted both open-ended and close-ended questionnaire designs. The questionnaire design entailed options from which respondents were to pick. However, where necessary, the last questions were normally open to allow an objective response from the respondent. In the first set of questionnaire, the variables investigated were 61 (captured in 61 questions) and divided into four sections, A,B, C and D. Section A of the variables questions explored the socio-economic characteristics of the respondents. Section B fielded questions on characteristics of health facility, having sub-sections such as types of ownership, location, accessibility, quality and patronage. Section C examined the functional efficiency of health facility. The Section D probed into the community involvement in the planning and management of health facility, having sub-sections such as management and supervision at the village or locality, planning and management.

The second set of questionnaire was designed mainly for the operators of the facility, using a combination of close and open-ended designs. The questions asked were 61 specifically and they were divided into six sections. Section A probed into the health facility characteristics. Section B investigated the availability of infrastructural facility. Section C fielded questions on the characteristics of personnel and availability of medical facility available. Section D searched into observations on the operational activities of the health facilities. Section E probed into the planning of health facility. And the questions in Section F were on the management of health facility.

For the third set of questionnaire, the design was done in form of a schedule of inventory which explored data on existing health facilities in the study area, mainly from the LGAs and the State Ministry of Health. These data included the total number of each category of health facilities available, information on available infrastructure in the health facilities, information on health indicators, existing planning and management policies/practices with reference to their perceived weak and strong points, among others.

3.3 Sample frame, sample size and sampling procedure

According to Terry (2004), a sample size was the number of units selected out of a population and which the investigator determined to use in a study and sampling procedure denoted all the steps and processes involved in selecting samples to be used in the study which is normally guided by the knowledge of a study environment or specific research situation. In connection to this, the study area, Ondo State, is made up of 18 local government areas (LGAs). Actually, the local government areas' creation was done purposefully because of the peculiarity of the problems in the individual LGAs. To ensure a wide coverage and representation of information, a multi-stage random sampling technique was employed in selecting the samples, because of its time and cost effectiveness. While the 18 LGAs constituted the first stage of the sampling units, selection of the three LGAs constituted the second stage of the sampling unit. This was carefully done to reflect segregation along the three senatorial districts and to reflect the settlement patterns. The selected LGAs are Ose, Akure North and Ilaje, which were Ondo North, Ondo Central and Ondo South senatorial districts, respectively (see figure 1). The reason for the selection was based on the fact that more number of health facilities (13,

12, and 12, in Ilaje, Akure North and Ose respectively) were available in the areas compared with figures available in other LGAs, with the exception of comprehensive health centres and general hospitals (see table 1).

Furthermore, Akure North formed the central focus of MDG development project, in terms of rural upgrading. The choice of the three LGAs was based on the fact that they constituted part of the seven rural local government areas of Ondo State (see Table 3.1). The total number of settlements in the three selected LGAs, drawn largely from 36 wards, was 328. Out of the 328 settlements, 11 were randomly selected for the study. This formed the third stage of the sampling unit.

The population of three selected LGAs of the study (20,515; 18,148; and 26,881, for Akure North, Ose and Ilaje, respectively) constituted the sample frame for the target respondents. A total number of 13 health facilities (4, 2 and 7, for Akure North, Ose and Ilaje LGAs, respectively) in the study area constituted the facility sample frame. In order to explore the characteristics of the rural households, the number of settlements was manageably reduced without losing their identities. The population of all the settlements in each LGA of the study area were classified into groups, using a population classification interval of 2,499. The significance of this was to ensure the easy collapse of the large settlements into equal groups and distinguish the rural from the urban settlement. All the settlements not up to 20,000 were considered. Those that were exactly 20,000 or above it were not considered. The reason was in recognition of the Nigerian definitions of rural area, as settlements with population of less than 20,000. Out of 328 settlements that made up the study area, based on population figure, 3.5 percent of the sum total of the rural settlements in each of the LGA was later taken for the study. The number of settlements arrived at were 3, 2 and 6, for Akure North, Ose and Ilaje LGAs, respectively (see tables 3.1 and 3.2). This settlement coverage allowed for drawing reliable inferences.

The settlements that were selected for the survey were taken through random sampling, every settlement having an equal chance of being selected. The random sampling process involved the use of balloting. In this regard, each settlement's name was written on a piece of paper. The squeezed pieces or slips were put inside a container (tin) which was then shaken many times thoroughly. After each shaking session, a

squeezed slip was taken. The process was repeated until the required number of settlements for each area (3.5 percent) was obtained.

In determining the sample size for the study, the population of the selected settlements of 1991 census was projected to 2009, using a population projection formula with a growth rate of 2.5 (Nigeria Population Census Annual Growth Rate for Rural Area). The projection was justifiable because the settlement population for 2006 on which this study was based had not yet been gazetted. The total number of the selected settlements was divided by 7 to obtain the number of households, based on the nation's average household standard for the rural area (NPC, 2006). Indeed, rural areas were characterised with people of low educational status without regard for birth control or family planning. Consequently, 10 percent of the total households (989) were selected for the interview which determined the sample size. The total figure arrived at for the three selected LGAs are 274, 126 and 357 (989 in all), for Akure North, Ose and Ilaje, respectively. This corroborates the submission that larger populations permitted smaller sampling ratio for equally good samples (Neuman, 1991). In Neuman's observation, as population size grew, the return in accuracy for sample size shrank.

Moreover, the sample size was justifiable when compared with: (a) the state-wide study on household budget survey, conducted in 2006 by the Research Statistics Department, Ministry of Finance and Planning, Ondo State, in which 815 households were selected; (b) the World Bank report on Decentralized Delivery of Primary Health Services in Nigeria, where 30 LGAs were selected; and (c) the NISER-sponsored country-wide study of demographic and economic characteristics of rural household in Nigeria, conducted by Titilola et al. (1998), in which only 500 household heads were selected.

The 10 percent sample size (989) already determined constituted the number of questionnaire that were administered. The target respondents were randomly selected for the purpose of questionnaire administration in the study area in Ondo State, the three LGAs, in specific. The selected settlements were stratified into quarters. Using systematic sampling method, the administration of questionnaire in the individual settlements took place at the entrance into each settlement from the main town. Within each quarter, every street was given consideration at the 2nd, 4th, 6th, 8th, 10th, and above, even consecutive

houses until the last building was exhausted. The household head in each house was picked for the interview. In the absence of the household head, any member of the household who was eighteen years and above was considered for the interview. This was done carefully to ensure that none was left out without being interviewed. This formed the fourth (last) stage of the sampling. This method was applied to all the settlements in the study area. The procedure used in determining the sample size as well as questionnaire administration is presented in Tables 3.2 and 3.3. Meanwhile, other questionnaires such as those addressed to the health care operators, local government officials, and the state Ministry of Health were purposively administered.

Furthermore, all the facilities in the settlements were taken for the survey. Meanwhile, sampled settlements which did not have facilities were used as control for those having facilities. This was in consonance with growth center theory of Bouldeville (1966) which envisaged that developmental impulse would spread from the center (settlements with facilities) to the surrounding periphery (settlements without facilities) (cited in Abiodun, 1981). Similar to this is diffusion articulated on "neighbourhood effect" and "hierarchical effect". The former, neighbourhood effects, means that the closer a potential adoption unit is to the source of an innovation, or to another unit that has already adopted the innovation, the greater the probability that the potential adoption unit will adopt ahead of potential units that are further away. On the other hand, the hierarchical effect means that for a defined hierarchical base, whether in terms of size, social status, and so forth, the higher the ranking of a potential adoption unit in that hierarchy, the greater the probability of adoption ahead of other potential units that are lower in the hierarchy (Carl Sauer, 1952). The facilities and the settlements are shown in table 3.1.

Table 3.1: Political wards and health facility allocation in Ondo State

LGAs	*No of Wards*	*No of Health Facilities Available*	*No of Rural Settlement*	*No of Urban Settlement*	*Total No of Health Facilities InUrban Area*	*No of Rural LGA*	*Total No of Health Facilitie-s in the Rural Area*
Akoko North East	13	13	23	1	13	-	-
Akoko North West	10	10	27	-	-	1	10
Akoko South East	11	11	10	-	-	1	11
Akoko South West	15	15	35	1	10	-	5
Akure North	11	11	90	-	-	1	11
Akure South	11	11	41	1	10	-	-
Ese Odo	11	11	121	-	-	1	11
Idanre	10	10	129	1	9	-	1
Ifedore	10	10	46	1	9	-	1
Ilaje	12	12	181	-	-	1	12
Ile Oluji-Okeigbo	10	10	152	1	6	-	4
Irele	10	10	136	1	5	-	5
Odigbo	11	11	164	1	2	-	9
Okitipupa	-	13	181	2	2	-	13
Ondo East	10	10	107	-	-	1	10
Ondo West	12	12	153	1	12	-	-
Ose	12	12	65	-	-	1	12
Owo	11	11	127	1	7	-	4
Total	191	204	1,788	12	85	7	119

Source: Computed by the Researcher from the records obtained from Ministry of Health & NPC Ondo State; 2010

Table 3.2: Sample frame and sample size of settlements in Ilaje, Ose, and Akure North LGAS

		ILAJE LGA		*OSE LGA*		*AKURE NORTH LGA*	
Class Interval of Population	***Group***	**No. of Settlement**	**No. of Settlements for Survey at 3.5%**	**No. of Settlements**	**No. of Settlement for Survey at 3.5%**	**No. of Settlements**	**No. of Settlements for Survey at 3.5%**
20,000 and above	I	NIL	NIL	NIL	NIL	NIL	-
18,500 – 19,999	II	NIL	NIL	NIL	-	NIL	-
15,000 – 17,999	III	NIL	NIL	1	0.035	1	0.035
13,000 – 14,999	IV	1	0.035	NIL	-	1	0.035
10,000 – 12,999	V	1	0.035	1	0.035	NIL	-
7,500 – 9,999	VI	1	0.035	NIL	-	NIL	-
5,000 – 7,4999	VII	2	0.07	2	0.07	1	0.035
2,500 – 4,499	VIII	12	0.42	8	0.28	1	0.035
Below 2,499	IX	154	5.5	55	1.93	86	3.01
TOTAL		171	6	67	2	90	3

Source: Computed by the Researcher from the records obtained from the NPC Ondo State, 2010

Table 3.3: Household sample frame and sample size in Akure North, Ose and Ilaje LGAs

	Name of Selected Settlement	*Base Population 1991*	*Projected Population 2010*	*Household Number (Population divided by 7)*	*Sample Size (10% of Population)*	*Number of Questionnaire Administered*
	AKURE NORTH LGAs					
1	Iju	14,679	19,466	3,352	335	335
2	Araromi Camp II	671	1,072	153	15	15
3	Oladele and Others	422	674	96	10	10
	OSE LGAs					
4	Okelusi	5,144	8,223	1,174	117	117
5	Imeri	2,043	3,266	466	46	46
	ILAJE LGAs					
6	Igbokoda	10,245	16,378	2,339	233	233
7	Ugbo	2,215	3,541	505	50	50
8	Uale Nla	632	1,010	144	14	14
9	Oberawoye	3,251	5,197	742	74	74
10	Idi-Ogba	3,465	5,539	791	79	79
11	Odumogun	694	1109	158	16	16
	TOTAL	43,458	69,475	9,920	989	989

Source: Computed by the Researcher from the records obtained from NPC Ondo State. 2010

Table 3.4: Facilities sampled in the three LGAs of the Study

	NAME OF SELECTED SETTLEMENT	*PUBLIC HEALTHCARE FACILITIES*	*PRIVATE HEALTHCARE FACILITIES*	*No of health care facilities*
	AKURE NORTH LGAs			
1	Iju	General hospital, basic health centre, health post	Adeyemi hospital, ife olu medical clinic,	5
2	Araromi Camp II			
3	Oladele and Others			
	OSE LGAs			
4	Okelusi	Maternity, Cottage hospital	Adelabu medical clinic	3
5	Imeri	Basic health centre		1
	ILAJE LGAs			
6	Igbokoda	Comprehensive Health centre ,general hospital,	Ebenezer medical clinic and ayemfuge	4
7	Ugbo			
8	Uale Nla			
9	Oberawoye	Basic health centre		1
10	Idi-Ogba			
11	Odumogun			
	TOTAL			14

Source: Computed by the Researcher from the records obtained from the Department of Research and Statistics, Ministry of Economic Planning and Budget, Ondo State, 2010

3.4 Method of Data Collection

First, a pilot survey was conducted in Ondo State in order to get acquainted with the situation on the field. The questionnaire designed was employed to elicit information from the respondents. This pre-test was done for two basic reasons: it was considered necessary to ascertain the extent to which the research questions would be capable of eliciting the desired responses (how they were worded, and how they were put across to the respondents); and the pre-test was intended to find out the reaction of the respondents to the length of time each interview session would last. Therefore, the pre-test questionnaire exercise was done with a view to expanding the original questions.

3.5 Method of Data Analysis

For the purpose of this study, the data collected were analysed using the SPSS computer software. Both descriptive and inferential statistics were employed in analysing the data that were generated. The descriptive statistics include the use of frequency tables, pie chart, percentages, and graphs. The data were in both interval and ordinal levels. The coding format for each of the hypothesis is stated below:

For hypothesis 1, the question asked on the independent variable was coded as:

'Who owns facility in your area?' – (a) Government = 1 (b) Private/Non-Government = 0.

For the dependent variable, the variables coded took into cognizance the perceived functionality of the health facilities as were asked from the respondents. This was so done because, as asserted by Onibokun (1997), technocrat approach to urban development and management issues saw health care management of the city as the sole prerogative of the technocrat with zero input from city dwellers. Incidentally, the city dwellers bore the consequences of the actions of the technocrats. Those mentioned variables are thus coded:

Staff adequacy – (a) adequate = 1 (b) not adequate = 0;

Response to emergency – (a) low = 0 (b) fast = 1;

Attitude of staff to patients – (a) very low = 0 (b) very high = 1;

Availability of drugs – (a) sufficient = 1 (b) not sufficient = 0;

Design capacity (no. of bed for inpatient) – (a) high = 1 (b) low = 0;

Cost of services – (a) costly = 1 (b) not costly = 0;

Availability of modern equipment – (a) available = 1 (b) not available = 0;

Community involvement – (a) involved = 1 (b) not involved = 0;

Effective management – (a) effective = 1 (b) not effective = 0.

Also, coding the variables was done using logistic regression. Logistic regression is a non-linear regression model that is used in predicting or estimating an outcome or a dependent variable that is categorised and which normally takes into consideration binary variables. The logistic regression model makes use of a single

predictor variable to predict the probability of a binomial event occurring, a fact corroborated by Udofia (2011). For the hypothesis 2, the questionnaire coding format for regression analysis was given as: for the Y variables, the variables in question were the health status being the reported cases of illness for the past two weeks, and the X variable included the facility types.

For the hypothesis 3, the questionnaire coding format for correlation analysis was given as: the Y variables coded was the patronage of health facility which had to do with question on whether or not the respondent patronised with options (a) Yes, and (b) No,

and the X variable was coded as Proximity of the facility where proximity (as used in this study) referred to question on whether the facility was far to the respondent with option (a) Yes and (b) No. Similarly, hypothesis four was coded using regression model. The Y variable was coded as the health status of the people in the study area and the X variable included the planning and the management variables.

The hypotheses formulated were analysed using the following statistical analytical methods:

The first hypothesis states: the ownership of health facilities does not affect its functionality. This first hypothesis was analysed using logistic regression model. Logistic regressions are bivariate analysis with not more than two independent variables.

The equation is given as:

$Y = \beta_0 + \beta_1 X_1 + e_1$,

Where Y = independent variable,

β_0 = the coefficient,

β_1 = coefficient of the X variables, and

X_1 signifies the variables and e = the error term.

The ownership of health facilities formed the independent variable, which may either be government or otherwise private. The independent variable (criterion) was coded as Y = ownership of facilities. The dependent variables otherwise known as predictor variables were coded each as separate models. The dependent variables were coded as following:

X_1 = staff adequacy = $Y = \beta_0 + \beta_1 X_1 + e_1$;

X_1 = response to emergency = $Y = \beta_0 + \beta_1 X_1 + e_1$;

X_1 = attitude of staff to patients= $Y = \beta_0 + \beta_1 X_1 + e_1$;

X_1 = cost of service= $Y = \beta_0 + \beta_1 X_1 + e_1$;

X_1 =availability of modern equipment = $Y = \beta_0 + \beta_1 X_1 + e_1$;

X_1 =availability of drugs = $Y = \beta_0 + \beta_1 X_1 + e_1$;

X_1 =design capacity = $Y = \beta_0 + \beta_1 X_1 + e_1$;

X_1 =community involvement = $Y = \beta_0 + \beta_1 X_1 + e_1$;

X_1 = effective management= $Y = \beta_0 + \beta_1 X_1 + e_1$.

The scaled response used was measured on a nominal scale. This was because the statistical analysis employed could not be determined in advance.

The second hypothesis states: there is no significant relationship between the health facility type and the health status of the people. This second hypothesis was analysed, in this study, using multiple regressions. Regression is used whenever relationship between two variables exist so as to predict or forecast. Multiple regressions, therefore, are multivariate analysis with more than two independent variables. The multiple regressions analysis of the independent variables has its equation given as:

$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_n X_n + e$,

where Y = independent variable,

a = the intercept,

b_1 = coefficient of the X variables,

where X_1 signifies the variables and e = the error term.

The dependent variable (criterion) was coded as: Y = health status which was coded as the reported cases of illness for the past two weeks and the independent variable otherwise known as predictor was the health facility types. The health facility types were coded as:

X_1 = Hospital;

X_2 = Health center;

X_3 = Private clinic;

X_4 = Maternity;

X_5 = Dispensary;

X_6 = Laboratory.

The third hypothesis states: the proximity of health facility does not influence patronage of the facility. This hypothesis was tested using correlation method of analysis. Correlation is used to determine the degree to which a relationship exists between two or more variables, normally expressed in form of correlation co-efficient, although different types of correlation exist. The one adopted in this study was Pearson Product Moment Correlation (PPMC), with particular use of the whole score method. The choice of the whole score method was informed by the fact that it is the more convenient among the other methods dealing with the pairs of raw scores instead of derived Z scores.

The PPMC formula is given as:

$$r = \frac{\sum XY - \overline{X}\,\overline{Y}}{\frac{N}{S_x \quad S_y,}}$$

Where N = the number of pairs of scores,

$\sum XY$ = is the sum of the product of each pair of scores,

$\overline{X}$ = the mean of the X distribution,

$\overline{Y}$ = the mean of the Y distribution,

S_x = the standard deviation of the X distribution, and

S_y = the standard deviation of the Y distribution,

By application; Y variables = the existing health facilities.

The fourth hypothesis was analysed by using multiple regression model. The multiple regression model equation is given as:

$$y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + \ldots b_{19} X_{19} + b_n X_n + e,$$

where Y = independent variable,

a = the intercept,

b_1 = coefficient of the X variables,

where X signifies the variables and e = the error term.

The dependent variable (criterion) was coded as: Y = health service delivery, which was given as proxy for health status, being the recorded cases of illness for the past two weeks. The independent variables, otherwise known as predictors, are the planning and management of health facility as contained in the questions asked the respondents. As noted earlier, Onibokun (1997) asserted that technocract approach to urban development and management saw health care management of the city as the sole prerogative of the technocracts with zero input from city dwellers. And incidentally, the city dwellers bore the consequences of the actions of the technocracts. The independent variables were expressed as binary as following:

X_1 = location – respondent involvement in the location of the facilities (a) Yes (b) No;

X_2 = Finance – affordability of the facilities charges (a) Yes (b) No;

X_3 = Sitting of facility – whether the respondent was informed in the selection of site for the location of the facilities (a) Yes (b) No;

X_4 = Distance – whether the respondent travels very far before reaching the health facility for treatment (a) Yes (b) No;

X_5 = Equipment – availability of equipment during in the patronage (a) Yes (b) No;

X_6 = Drugs – availability of drugs during the last visit to the health facilities by the respondent (a) Yes (b) No;

X_7 = Environment – how clean was the facilities' environment when the respondent visited last? (a)Very clean (b) clean (c) Not clean;

X_8 = Emergency – quickness to the respondent in time of emergency? Yes (b) No;

X_9 = Collaboration – is there any collaboration between the respondents' community and the health providers? (a) Yes (b) No;

X_{10} = Culture – cultural consideration of the respondent by the planner before the facilities were located in their area (a) Yes (b) No;

X_{11} = Personnel – availability of the staff (doctors, nurses, midwifes, etc.) always, anytime the respondent visited (a) Yes (b) No;

X_{12} = Village development committee participation – do you participate in VDC (a) Yes (b) No;

X_{13} = Supervision – the supervision of the respondents' work (a) Yes (b) No;

X_{14} = Routine meetings – availability of routine meeting (a) Yes (b) No;

X_{15} = Opinion – whether the respondent is allowed to give opinion during meetings (a) Yes (b) No.

Other coded independent variables included: respondent's choice of feedback mechanism among several choices. If a choice is ticked, it equals one, and otherwise zero. These latter variables were coded as following:

X_{16} = Suggestion box;

X_{17} = Quality assessment;

X_{18} = General complaint;

X_{19} = Involvement of community;

X_{20} = Community dialogue.

The study also sought to analyse the distributional pattern of health care facilities as it was affected by planning and management. The NNA (Nearest Neighbour Analysis) was used. This was based on a straight line measurement of distance, separating a phenomenon and the nearest neighbour space. NNA was developed by the plant ecologists Clark and Evans originally, because of their interest in the distribution of various plants species over the earth surface in 1954 (Ayeni, 2000). The method indicated the degree to which any observed distribution deviated from what might be expected. If the distribution of points was random, phenomena were said to be randomly distributed having satisfied the following conditions:

a. Any part in the area had the same chance of occurring in any sub-area like any other point;
b. Any sub-area of specified size had the same chance of receiving a point as any sub-area of that size;
c. The placement on the location of each point was not influenced by any other point.

The formula for the Nearest Neighbour Analysis is given as:

R = ra ÷ re,

where R = Nearest Neighbour Analysis,

ra = observed means distance which is the average between points in the areas to their neighbour,

re = 1√n,

where n equals to the observed density of points in the area; and density is defined as the number of points per square unit of measurement if it is –

random = 1.0,

Clustered (agglomeration pattern) = 0, and

Regular in space (uniform or hexagram) = 2.149.

In the area of health status as used as a surrogate for health service delivery, the current study employed the self-rated health status (as a reported case of illness for a period of two weeks) dysfunction, adapting the Equation 2 thus:

$I_t = f(A_1, G_1, HH_1, R_1, H_t, InLI_1, InC, InD_1, ED_1, MR_1, S_1, H1, InY, E_1)$…(2)

Where I_t (that is, self-reported illness in current +ve t) is a function of age of respondents.

A_1…InY are demographic variables and E_1 error item or residual error.

In the area of health status rating, as discussed with reference to heath pattern of the people, the study applied Nothingham Profile of Health (NPH) status measurement, because of its brevity and ease of population burden. Following this example, Bourne (2009) used self-rated health status similar to that of Nothingham Profile where such a question as 'how is your health in general?' is asked. The options given were Very good, Good, Fair, Poor and Very poor. These options were later reconstructed into three categories as: (1) Good ,(2) Fair, and (3) Poor. Moreover, a binary was later created from the three variables and these were (1) Good, and (2) Fair. For this study, the same constructed binary was used to describe the pattern of the health status of the people, as whether the respondent's health was good or fair.

Self-reported health status measurement was defined as a person's response to the questions: 'Has a doctor ever told you that you had … (diabetes or syn diabetes)?' A respondent could respond 'Yes', 'No', or 'Don't know'. If the respondent failed to answer the question, then the response was noted as not ascertained. In the case of either 'Don't know' (n = 33) or 'No response' (n = 25), the respondent was classified into not having diabetes. A similar approach was used to classify other co-morbidity responses. Persons with diabetes were also classified as using or not using insulin treatment, based on self reports. Persons who were classified as not using insulin treatment included persons who had non-insulin dependent diabetes, since some people with non-insulin dependent diabetes received insulin to manage their condition.

CHAPTER FOUR

DISCUSSION OF PLANNING RESULT

Socio-economic characteristics of the rural households in the study area

4.0 Introduction

This section of the study presents the socio-economic characteristics of the respondents. Other areas to be addressed in this section are: perception of health care facilities and health care providers; health care financing and budgetary allocation; planning for health care facilities with reference to standard as a tool for determining the extent to which the existing health care facilities had conformed to the planning ethics; physical aspect of the facilities as it borders on the infrastructure; operational activities of the facilities; managers and their attitudes towards the health care; and the planning and management of health care facilities from the service providers' perspective, among others. In this chapter on socio-economic characteristics of the rural dwellers, variables considered were: location of the respondents, age, gender, marital status, education, occupation income, religion household size, nationality, among others.

4.1 Locations of Respondents

Table 4.1 indicates that majority of the respondents were from Ilaje and Akure North Local Government Areas, accounting for 466 (47.1 percent) and 360 (36.4 percent), respectively, while the respondents from Ose Local Government Area accounted for 163 (16 percent) being the lowest. From each local government area, different settlements were allocated different number of questionnaires based on the procedures and criteria mentioned earlier in chapter 3. This explained the reasons for the variation of the responses in the study area.

Table 4.1: Location of the Respondents

Location	*LGA*	*Frequency*	*Percentage*
Igbokoda		233	
Ugbo		50	
Uale Nla	Ilaje LGA	14	47.1
Oberawoye		74	
Idi-ogba		79	
Odumogun		16	
Sub-total		466	
Iju		335	
Araromi Camp II	Akure North LGA	15	36.4
Oladele & others		10	
		360	
Okeluse	Ose LGA	117	
Imeri		46	16.5
Sub- total		163	
Grand Total		989	100.0

Sources: Author's Field work, 2010.

4.2 Age distribution of respondents

Analysis of the age distribution of the respondents is contained in table 4.2. The table shows the extent of variation among the settlements in the study area with respect to age distribution. It also shows that those between 18-45 years of age ranked the highest with 191 (82 percent) in Igbokoda (Ilaje LGA): 13 (81.3 percent) in Odumogun and 40 (80 percent) for Ugbo and Araromi Camp II (Akure North LGA). Idi Ogba was the lowest having 35 (44 percent). Those that were within 46-60years were mostly in Idi-Ogba and Oladele. Others had 40 (51.9 percent) and 4 (40.0) percent), respectively. Meanwhile, Igbokoda and Araromi Camp II accounted for the lowest age distribution accounting for 32 (13.7) and two (13.3 percent) respectively. Respondents above 60 years of age affirmed that Iju has the highest with 1(10.0 percent) and Idi Ogba lagged behind with low a figure of three (3.8 percent). There was none in Uale Nla.

The implication of this distribution is that there was a serious decline in the population of the elderly in the study area. The table also shows a thining down of dependent population and more of the active and working age population. Perhaps, this is good for growth of the local economy. Those in the active stage have high percentage showing a substantial number of people that were within the labour force and matured enough to give account of their health.

Table 4.2 Age distribution of the respodents by settlements

Area	*No*	*18-45 years %*	*No*	*46-60 years%*	*No*	*Above 60 years %*	*Total*
Igbokoda	191	82.0	32	13.7	10	4.3	233
Ugbo	40	80.0	7	14.0	33	6.0	50
Uale Nla	9	64.3	5	35.7	0	0.0	14
Oberawoye	54	73.0	15	20.3	5	6.8	74
Idi- ogba	35	44.3	41	51.9	3	3.8	79
Odumogun	13	81.3	3	18.8	0	0.0	16
Iju	230	68.7	69	20.6	36	10.7	335
Araromi Camp II	12	80.0	2	13.3	1	10.7	15
Oladele & others	5	50.0	4	40.0	1	10.0	10
Okeluse	87	74.4	20	17.1	10	8.4	117
Imeri	31	67.4	11	23.9	4	8.7	46
Total	707	71.5	202	21.1	73	7.4	957

Sources:Author's fieldwork, 2010

4.3 Gender of respondents

Table 4.3 shows the gender analysis of the respondents in the study area. Majority of the respondents, that is 520 (52.6 percent) were males, while 469 (47.4 percent) were females. However, as indicated in the table, there were more females than males in the area of study in Oladele and others, Odumogun and Idi-Ogba – 7, 11 and 50 females (70.0, 68.8 and 63.3 percent, respectively), compared with 3, 5 and 36.7 (30, 31.3 and 36.7 percent, respectively). The variation could be as a result of the timing of the survey in the area; it was in the raining season. Perhaps, more women had gone to the market. Since the survey targeted the household, it would be illogical to administer questionnaire to the people at the market square. The extent of the variation can be seen in table 4.3 below.

Table 4.3: Gender distribution of the respondents

Area (Settlements)	*Male*	*%*	*Female*	*%*	*No*	*Percentage*
Igbokoda	135	57.9	98	42.1	233	100
Ugbo	30	60.0	20	40.0	50	100
Uale Nla	8	57.1	6	42.9	14	100
Oberawoye	33	44.6	41	55.4	74	100
Idi- ogba	29	36.7	50	63.3	79	100
Odumogun	5	31.3	11	68.8	16	100
Iju	182	54.3	153	45.7	335	100
Araromi Camp II	10	66.7	5	33.3	15	100
Oladele & others	3	30.0	7	70.0	10	100
Okeluse	64	54.7	53	45.3	117	100
Imeri	21	45.7	25	54.3	46	100
Total	520	52.6	469	47.4	989	100

Source: Author's field work 2010

4.4 Marital status of respondents

The marital statuses of the respondents are shown in table 4.4. About 596 (60.3 percent) were married, meaning that over one and a half of the respondents were married. Ten (1.6 percent) of the respondents were divorced and 38 (3.8 percent) were widows/widowers. The percentage of the married respondents varied across the study area. The issue of divorce by the respondents revealed that there was non in Ugbo, Uale Nla, Araromi Camp II, Oladele & others, Imeri and Okeluse. Iju recorded the highest number of the widowed respondents that is three (6.5 percent), and the lowest percentage of the widowed, 2, (2.5 percent) was seen in Idi-Ogba. The singles accounted for 343 (34.7 percent) of the total respondents. Others (2 and 0.1 percent) did not know what to say.

The above results implied relatively stable homes in the sampled settlements. The relatively stable homes could be as a result of a high level of adherence to cultural values and traditions in the rural communities, where fidelity and endurance in marriage was particularly esteemed, regardless of marital problems encountered in the homes.

Table 4.4: Percentage marital status of the respondents

Area	*Single*	*%*	*Married*	*%*	*Divorced*	*%*	*Widowed*	*%*	*Others*	*%*
Igbokoda	105	45.1	116	49.8	4	1.7	8	3.4	0	0.0
Ugbo	22	44.0	28	56.0	0	0.0	0	0.0	0	0.0
Uale Nla	6	42.9	8	57.1	0	0.0	0	0.0	0	0.0
Oberawoye	20	27.0	50	67.6	2	2.7	2	2.7	0	0.0
Idi- ogba	17	21.5	58	73.4	2	2.5	2	2.5	0	0.9
Odumogun	4	25.0	12	75.0	0	0.0	0	0.0	0	0.0
Iju	116	34.6	197	58.8	2	0.6	18	5.4	2	0.0
Araromi Camp II	3	20.0	12	80.0	0	0.0	0	0.0	0	0.0
Oladele & others	2	20.0	8	80.0	0	0.0	0	0.0	0	0.0
Okeluse	34	29.1	78	66.7	0	0.0	5	4.3	0	0.0
Imeri	14	30.4	29	63.0	0	0.0	3	6.5	0	0.0
Total	343	34.7	596	60.3	10	1.6	38	3.8	2	0.1

Sources:Author's fieldwork, 2010

4.5 Educational status of respondents

Education is a key determinant of the lifestyle and societal status of individual. Studies have consistently shown that educational attainment has a strong effect on health behaviours and attitudes. The analysis presented here shows the educational

status of the respondents as they varied across the study area. Table 4.5 shows that a high percentage of the respondents were literate. Those with secondary school education accounted for 511 (51.7 percent). This is followed by the degree holders (HND, NCE, BSc. and B.A. degree holders, specifically) which accounted for 189 (19.1 percent). The educational status distribution might be connected with the fact that the people in the rural area appreciated the importance of education.

Furthermore, in 1979, and shortly after the creation of Ondo state, the state government offered the indigenes free education. Yet, it was observed that the high level of unemployment in the country, Nigeria, at large, could also explain the return of many native young graduates to the rural areas where they turned to primary production businesses in order to earn their living. The illiteracy level was very low, accounting for only 186 (18.8 percent) of the entire sampled areas. The higher degree (Master/PhD) holders were 11 (1.1 percent). The number was relatively high in Igbokoda with four (1.7 percent) of the higher degree holders.

Table 4.5: Educational status of the respondents

Area	*No formal education*		*Primary Sch. education*		*Secondary Sch. certification*		*HND, NCE, BSC, B.A.*		*Masters/PhD*		*Total*	
	No	%	No	%	No	%	No	%	No	%	No	%
Igbokoda	19	8.2	36	15.5	121	51.9	53	22.7	4	1.7	233	100
Ugbo	3	6	9	18	32	64	6	12	0	0	50	100
Uale Nla	2	14.3	2	14.3	8	57.1	2	14.3	0	0	14	100
Oberawoye	16	21.6	10	13.5	40	54.1	7	9.5	1	1.4	74	100
Idi- ogba	1	1.3	16	20.3	45	57	16	20.3	1	1.3	79	100
Odumogun	0	0	3	18.8	11	68.8	2	12.5	0	0	16	100
Iju	31	9.3	78	23.3	146	43.6	76	22.7	4	1.2	335	100
Araromi Camp II	1	6.7	2	13.3	9	60	3	20	0	0	15	100
Oladele & others	2	20	2	20	6	60	0	0	0	0	10	100
Okeluse	12	10.3	16	13.7	71	60.7	17	14.5	1	0.9	117	100
Imeri	5	10.9	12	26.1	22	47.8	7	15.2	0	0	46	100
Total	92	9.3	186	18.8	511	51.7	189	19.1	11	1.1	989	

Source: Author's fieldwork, 2010

4.6 Occupational status of respondents

Table 4.6 shows the occupational status of the respondents. Among the occupational categories, those engaged in farming activities accounted for 154 (15.6 percent). Those that were involved in crafting, civil service, teaching, healing,

transportation and hired labour accounted for 62, 66, 58, 4, 48 and 22 (6.3, 6.7, 5.9, 0.4, 4.9 and 2.2 percents), respectively. Others such as the migrants who engaged in activities other than the stated categories had the highest distribution, accounting for 575 (53.1 percent).

The data reveal that only few people were engaged in farming activities, owing to the fact that several young school leavers opted for or preferred white-collar jobs. It may not be surprising to note the low distributions-66 and 58 (6.7 and 5.9 percent) of respondents who were civil servants and teachers, respectively. This might be due to poor infrastructure and road network factors which discouraged people from staying in the rural areas. In addition, the other respondents were residents who migrated to the rural areas as a result of unemployment and who found it difficult to engage in the primary production activities of farming. Farming might be regarded as a menial job among them. World Fact (2004) recorded that people, particularly in rural areas, had low interest in agriculture.

Meanwhile, there was a considerable variation in the settlement patterns. The variation was based on the occupational categories. For instance, there were no responses for healing except at Igbokoda, Ugbo and Araromi Camp II. These three settlements accounted for the low percentages of 0.9, 2.0 and 1, respectively. This demonstrated that people in the study area believed in orthodox medicine than traditional healing which was anticipated to be a preferred and dominant healing option in the rural areas. The exceptional case of 0.0 percent of civil servants in Araromi Camp II, Oladele & others was an indication that the people were mainly farmers, although they had a primary school. The teachers at the primary school were resident elsewhere, and would have to shuttle between the place of their residence and work. This explained the reason the respondents on teaching were three (20.0 percent), and 1 respondent (10.0 percent) in the sampled population, respectively. The variation across the settlements is shown in Table 4.6 below.

Table 4.6: Occupational status of the respondents

Area	*Farming*		*Crafting*		*Civil service*		*Teaching*		*Healing*		*Transport.*		*Labourer (Hired Labourer*		*Others*	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
Igbokoda	11	7.3	12	5.2	16	6.9	13	5.6	2	0.9	11	4.7	6	2.6	156	67.0
Ugbo	1	4.0	2	4.0	1	2.0	4	3.0	1	2.0	7	14.0	2	4.0	31	62.0
Uale Nla	1	2.4	0	0.0	2	14.3	0	0.0	0	0.0	2	14.3	1	7.1	6	42.9
Oberawoye	6	3.1	5	6.3	3	4.1	3	4.1	0	0.0	6	3.1	0	2.7	49	66.2
Idi- ogba	12	15.2	9	11.4	4	5.1	9	11.4	0	0.0	6	7.6	0	0.0	39	49.4
Odumogun	1	12.5	0	0.0	3	13.3	0	0.0	0	0.0	2	12.5	0	0.0	9	56.3
Iju	74	22.1	22	6.6	26	7.3	19	5.7	0	0.0	9	2.7	5	1.5	130	53.7
Araromi Camp II	3	20.0	2	13.3	0	0.0	3	20.0	1	6.7	0	0.0	2	13.3	4	26.7
Oladele & others	3	30.0	3	30.0	0	0.0	1	10.0	0	0.0	0	0.0	0	0.0	3	30.0
Okeluse	21	23.9	6	5.1	2	1.7	3	2.6	0	0.0	3	2.6	2	1.7	73	62.4
Imeri	4	3.7	1	2.2	9	19.6	3	6.5	0	0.0	2	4.3	2	4.3	25	54.3
Total	154	15.6	62	6.3	66	6.7	58	5.9	4	0.4	48	4.9	22	2.2	575	53.1

Sources: Author's fieldwork, 2010

4.7 Annual income of respondents

In Table 4.7, the annual income of the respondents is clearly presented. Those that earned less than N36,000 per annum accounted for 275 (32.0 percent). They were followed by those within the range of N36,000-N72,000 who were 268 (31.2 percent). Those that earned between N72,000 and N108,000, N108,000 and N144,000, and above accounted for 103, 80 and 133 (12.0, 9.3 and 15.3 percent), respectively. There was also a considerable variation across the settlement areas. For instance, Oberawoye and Imeri have the highest number of respondents, 26 and 21(4.5 and 51.2 percentages), respectively, with earnings below N36,000 per annum. There were no cases of earnings from Araromi. Similarly, in Oladele and others for N108,000-N144,000 and N144,000 and above there were no responses. This implies that people in these areas – Oberawoye, Imeri and Oladele and others – were living below poverty level. As for those at the high quartile, the people did not have gainful employments either. Notwithstanding, seven (53.8 percent) of the respondents earned high, between N36,000 and N72,000, in Araromi Camp II, and in Okulese, they

earned low. Those that earned between N72, 000 and N108, 000 were 4 (26.7 percent) and high in Odumogun and low being 4 (4.9 percent) in Imeri. Those that earned between N108,000-N144,000, Imeri, Iju and Oberawoye, were 5 (12.2 percent), while those that earned above N144, 000 rated high in Araromi Camp II being 4 (30.8 percent).

In general, it could be said that a substantial number of 63.2 percent of the respondents were living below poverty level, when viewed against the minimum wage of N7,500 of the federal government. Definitely, this would have a negative effect on their demand for health care services whenever they were ill or indisposed. The variation across the settlement patterns can be seen in table 4.7.

Table 4.7: Annual income status of the respondents

Area	*Less than N36,000*		*N36,000 - N72,000*		*N72,000 – N108,000*		*N108,000 – N144,000*		*N144,000 and above*	
	No	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**
Igbokoda	60	29.7	17	34.4	24	11.9	16	7.9	32	15.8
Ugbo	17	38.6	13	29.5	3	11.4	4	9.1	5	11.4
Uale Nla	4	28.6	5	35.7	0	0.0	3	21.4	2	14.3
Oberawoye	26	45.6	14	24.6	4	7.0	7	12.2	6	10.5
Idi- ogba	19	25.0	35	46.1	15	19.7	3	3.9	4	5.3
Odumogun	3	20.0	7	46.7	4	26.7	0	0.0	1	6.7
Iju	79	28.3	80	28.7	32	11.5	34	12.2	54	19.4
Araromi Camp II	0	0.0	7	53.8	1	7.7	1	7.7	4	30.8
Oladele & others	4	40.0	5	50.0	1	10.0	0	0.0	0	0.0
Okeluse	42	38.9	23	21.3	15	13.9	7	6.5	21	19.4
Imeri	21	51.2	9	22.0	2	4.9	5	12.2	4	9.3
Total	275	32.0	268	31.2	103	12.0	80	9.3	133	15.5

Source: Author's fieldwork 2010.

4.8 Religion status of the respondents

The analysis in Table 4.8 shows the religion of the respondents. Religious affiiation of people can affect the planning, and management of health care facilities. Some religious sects advocate healing without medication.In such a situation, the perception and patronage of health care facilities can be negatively affected. From the result, a good number of the respondents were predominantly Christians, accounting for (907) 91.7 while Muslim faithfuls accounted for (71)7.2. Traditional religion and others, such as Grail message and free thinkers (atheists) constitute a negligible proportion of the sampled population accounting for seven and four (0.7 percent and 0.4 percent respectively). The variation in the religious affliation across the study area

can be seen in Table 4.8. Uale Nla and Araromi Camp II had 14 and 15(100 percent) Christian respondents with Igbokoda and Ugbo accounting for 211 and three (90.6 and 6.0 percent), respectively. People belonging to other religions (Grail message and atheists), beside the three major religions in the study area, accounted for three (3.8 percent) of the respondent in Idi-Ogba and one (2.0 percent) at Ugbo. The reason for a high proportion of Christianity is not unconnected with the fact that the study area particularly the Ilaje LGA, were claimed (by the respondents) to have been founded by Christians (Zion), and that any other religion worshipper could be a visitor or a stranger.

Table 4.8: The religion of the respondents

Area	*Traditional*		*Christianity*		*Islam*		*Others*	
	No	%	No	%	No	%	No	%
Igbokoda	5	2.1	211	90.6	17	7.3	0	0.0
Ugbo	0	0.0	46	92.0	3	6.0	1	2.0
Uale Nla	0	0.0	14	100.0	0	0.0	0	0.0
Oberawoye	1	1.4	73	98.6	0	0.0	0	0.0
Idi- ogba	0	0.0	68	86.1	8	10.1	3	3.8
Odumogun	0	0.0	16	100.0	0	0.0	0	0.0
Iju	1	0.3	297	88.7	37	11.0	0	0.0
Araromi Camp II	0	0.0	15	100.0	0	0.0	0	0.0
Oladele & others	0	0.0	9	90.0	1	10.0	0	0.0
Okeluse	0	0.0	112	95.7	5	4.3	0	0.0
Imeri	0	0.0	46	100.0	0	0.0	0	0.0
Total	7	0.7	907	91.7	71	7.2	4	0.4

Sources: Author's fieldwork, 2010

4.9 Household compositions among respondents

The information on the key aspects of household composition involved the size of the household. This was regarded as the number of people that eat from the same pot, earned under the same roof headed by the household head. The average household size in the rural area was between 6 to 8 members (NPC, 2006). Table 4.9 shows the household size in the study area. The overall analysis shows that a high percentage of the respondents (62.4 percent) had household sizes below the average standard. While a household of 6-9 persons had 275 (27.3 percent) respondents, a household size of 10-13 persons accounted for 75 (7.6 percent). Twenty-one (2.1

percent) had household size of between 14 and 16 persons. Suprisingly, 124 (12.5 percent) of the respondents had one person per household.

A reason for the low percentage of one person per household was that a lot of the respondents were young bachelors and spinsters. Moreover, many of the young respondents had high literacy level which, undoubtebly would have exposed them to the use of contraceptives. It was not impossible that for the purpose of birth control, the educated younger respondents were well exposed to the use of contraceptives. In addition, late marriage could account for the low number of household size. There are observable cases, such as in Idi-Ogba where there were increases in household sizes between 6 to10 persons. In this case, the facilities could be over-stretched to the point of damage. This fact corroborated the assertion that economic resources were more often limited in larger houses than where the size of the household was small and that overcrowding can also lead to health problems (Olujimi, 2003). The variation in household sizes among the respondents across the study area of Ondo State is shown in table 4.9.

Table 4.9: The household size of the study area

Area	***1 person***		***2-5 persons***		***6-9 persons***		***10-13 persons***		***14-16 persons***	
	No	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**
Igbokoda	23	9.9	130	55.8	63	27.0	12	5.2	5	2.1
Ugbo	6	12.0	24	48.0	11	22.0	7	14.0	2	4.0
Uale Nla	0	0.0	5	35.7	5	35.7	2	14.3	2	14.3
Oberawoye	6	8.1	39	52.7	21	28.4	5	6.8	3	4.1
Idi- ogba	4	5.1	27	34.2	32	40.3	13	16.5	3	3.8
Odumogun	3	18.8	3	50.0	4	25.0	0	0.0	1	6.3
Iju	48	14.3	181	54.0	93	27.3	11	3.3	2	0.6
Araromi Camp II	7	46.7	2	13.3	6	40.3	0	0.0	0	0.0
Oladele & others	1	10.0	2	20.0	3	30.0	3	30.0	1	10.0
Okeluse	16	13.7	56	47.9	27	23.1	16	13.7	2	0.0
Imeri	10	21.7	20	43.5	10	21.7	6	13.0	0	0.0
Total	124	12.5	494	49.9	275	27.3	75	7.6	21	2.1

Sources:Author's fieldwork, 2010

4.10 Lengths of stay of respondents in their locations

The data in table 4.10 shows the length of stay of the respondents in the study area. The table reveals that the majority of the respondents 559 (56.5 percent) had stayed for over 15 years in all the sampled settlements. One hundred and fourty-one (14.3 percent) had stayed for less than 5 years. One hundred and one (16.3 percent) respondents had stayed between 5 and 10 years in the settlements, while 126 (12.9 percent) had stayed for between 11 and 15 years, being the lowest percentage. The length of stay of an individual could determine the extent and level of his or her response about an area and the events that happened there. Those who had stayed for less than 5 years could be those who came for one assignment or the other. Since the majority of the respondents had been staying for more than 5 years, it implies that they could have a grasp of health-related issues and developments, and be able to give relevant information about facilities in the area.

Table 4.10: The length of stay of the respondents

Area	*Less than 5 years ago*		*5 – 10 years ago*		*11 -15 years*		*Over 15 years*	
	No	%	No	%	No	%	No	%
Igbokoda	34	14.6	57	24.5	37	15.9	105	43.1
Ugbo	3	16.0	9	18.0	10	20.0	23	46.1
Uale Nla	1	7.1	2	14.3	3	21.4	8	37.1
Oberawoye	13	17.6	8	10.8	11	14.9	42	36.8
Idi Ogba	10	12.7	2	2.5	7	8.9	60	75.9
Odumogun	3	18.8	2	12.5	1	6.3	10	62.5
Iju	47	14.0	56	16.7	39	11.6	193	57.6
Araromi Camp II	1	6.7	2	13.3	2	13.3	10	66.7
Oladele & others	1	10.0	1	10.0	1	10.0	7	70.0
Okeluse	19	16.2	13	11.1	14	12.0	71	60.7
Imeri	4	8.7	9	19.6	3	6.5	30	65.2
Total	141	14.3	161	16.3	126	12.9	559	56.2

Source: Author's fieldwork, 2010

4.11. Health facilities and health care providers

This section presents and discusses the result of the study on the health facilities'operators or providers in the study areas of Ondo State, as well as general overview on the health facilities. Modern health care service delivery in Nigeria is at different levels, viz: primary, secondary, and tertiary health care services. These services are offered through facilities which are owned by either public or private/non-governmental organizations. Indeed, the private/non-governmental organizations act as major players in the nation's health care delivery system.

Health posts are the lowest level of health facilities in the country, Nigeria. The health post is usually staffed by one community health worker, while market-based clinics are facilities which are established in sparsely populated rural areas of Nigeria – and Africa, in general. This is done in order to make health care services available and better accessible to people through a well-organized and coordinated mobile clinics. Moreover, there are the dispensaries, another lower level in the public health system and the first point of contact with patients in the country. The dispensaries are staffed with nurses, public health technicians, and dressers (that is, medical assistants). The enrolled nurses provide antenatal care and treatment for simple medical problems during pregnancy, problems such as anaemia; and occasionally, they engage in normal child deliveries. The enrolled nurses at the dispensaries also provide basic out-patient curative care.

Family planning units are integrated to health facilities that include health centers, and hospitals, among others. Health centers are staffed by midwives or nurses, clinical officers, and occasionally, by doctors. They provide a wider range of services, such as basic curative and preventive services for adults and children, as well as reproductive health services. They also provide minor surgical services such as incision and drainage. They augment their services coverage with outreach health services, and refer severe and complicated conditions to the appropriate levels, which include general hospitals.

The state general hospitals serve as referral hospitals to their local government hospitals. The general hospitals also provide very specialised care. They are the intermediary between the federal and local government health institutions. They oversee the implementations of health policy at the state level; maintain quality standard; and coordinate, and control all state health services. In the study area,

similar private hospitals were available at the state level. Health service delivery in Nigeria, essentially, is situated in the concurrent list; the private health practitioners can, thus, be equally involved in the health care delivery. Among the facilities sampled in the study area, market-base clinics were not found to be operated. NHP (1988) has established that the provision of health facilities in various parts of the country was one of the main objectives of health care delivery system. The facility spread was to ensure that a large proportion of the population had easy access to health services. Table 4.11.0 displays the profile of the health care facilities in the study area.

Table 4.11.0 Profile of health care facilities in the study area

Settlement	***Existing Population 2010***	***Types of Facilities***						
		Health Post	**Clinic/ Maternity**	**Basic Health centre**	**Comprehensive Health**	**Gen. Hospital**	**Private Hosp**	**Total Facilities**
Iju	19,466	1	1	1	-	1	1	5
Araromi camp	1072	-	-	-	-	-	-	
Oladele camp	674	-	-	-	-	-	-	
Imeri	3266	-	-	1	-	-	-	1
Okeluse	8223	-	1	-	-	-	-	1
Idi Ogba	5539	-	-	-	-	-	-	
Ugbo	3541	-	-	-	-	-	-	
Uale Nla	1010	-	-	-	-	-	-	
Igbokoda	16378	-	1	1	1	1	1	5
Odumogun	1109	-	-	-	-	-	-	
Oberawoye	5197	-	-	1	-	-	-	1
Total	65,475	1	3	4	1	2	2	13

Author's field work, 2010

Note: NA – Not Available

4.11.1 Types and ownership of health facilities

From table 4.11.1, the types and ownership of health facilities in the study area were classified into type I, type II and type III. This was done in accordance with the guidelines of Basic Health Service Scheme, as initiated by the precursor of PHC development in Nigeria. Each unit was to consist of one comprehensive health center serving as the referral center, four primary health centers, with each primary health center serving as a referral center for five comprehensive health clinics. This system was replicated in individual local government areas. According to the National Council on Health (1991), each village should have a health post; a group of village or community below the district should have a health clinic; and a primary health center in each health center or general hospital should serve as a referral.

Table 4.11.1 shows the classifications by their types. Type I had about six health facilities (private and public, 50 percent each): Basic Health Centers in Iju and Imeri, Adelabu Clinic, Ebenezer Medical Clinic and Ayemafuge Hospital. Type II had one health facility (50 percent) provided by the state government and one other (50 percent) provided by the local government: Heath Post and Maternity Okeluse. Type III included Comprehensive Health Center; General Hospital, Iju; Cottage Hospital; Maternity, Okeluse; and General Hospital, Igbokoda. While most of the health facilities surveyed are government-owned, the classification included both the private and the public-owned health centers. It was amazing that most of the private hospitals or health centers further performed the functions of higher-order facilities.

According to the survey conducted by NPHCDA (2001), the Nigerian health policy should be established in line with political districts. Meanwhile, the average number of wards was 10. From the areas surveyed, there were no health facilities of any type in Araromi II, and Oladele and others. Also, no facility was found in Uale Nla, Ugbo, Idi-Ogba, among others. Hence, people had to travel as far as 50km to receive medical treatment. Given this observation, it could be said that there was inequity in the distribution of health facilities. The study by Ajala et al. (2005) revealed similar health facilities distribution inequity as characterising the rural areas of Osun State.

In respect of Type II health facilities, the government showed some fairness in the location of certain facilities in the three sampled LGAs. Each of the sampled

LGAs had at least one hospital; there was a cottage hospital in Ose and a general hospital in each of the remaining two LGAs, Ilaje and Akure North. Nonetheless, this provision obviously could not translate to the required distribution equity.

None of the three LGAs had the type IV facility. This might not be unexpected because the study areas were rural settlements. Each of the health facility managers were asked if there existed any hospital annex as an outreach service for the people. All the facilities which were, particularly, owned by the government had no outreach services, except the Comprehensive Health Center at Igbokoda and private medical institutions. Of course, the private medical institutions were expected to provide outreach services to the people in the area. In Okeluse (Ose LGA), for instance, the private clinic (Adelabu Clinic) was annexed to Adelabu Hospital in Ifon. Other private hospitals in the remaining LGAs were similarly annexes of other hospitals. Ife-Olu Medical Clinic had her annex elsewhere, among others. Table 4.11.1 shows the distribution by facilities (also, see figures 4.1, 4.2, 4.3 and 4.4).

The implication was that annexes of hospital would only be available in a place if there was a high demand for medical services, besides the profit maximisation that characterised private medical businesses in Nigeria. This assertion was confirmed by Hillary and Gerry (2002) who believed that the international health organisations had acknowledged for some time that large number of health transactions in both low and middle-income earning countries took place outside the public health care delivery system and this cannot be ignored in the planning and financing of the health sector.

From the foregoing, it is evident that the major actors in the provision of health care facilities were mainly the government (both the state and local governments) and the private providers. The contribution of non-governmental organisations was in the area of provision of drugs only. The NGOs' involvement will be examined later in this section.

Table 4.11: 1 Type and ownerships of health facilities in the study area

Types of facilities	*Ownership*													
	Federal Govt.		State Govt.		Local Govt.		Private		Missions		Voluntary		Total	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%
Type 1: health post, health clinic, dispensary	0	0	0	0	3	50	3	50	0	0	0	0	6	100
Type II: Primary health centers	0	0	1	50	1	50	0	0	0	0	0	0	2	100
Type III: Comprehensive health centers, cottage hospitals	0	0	3	75		0	1	25	0	0	0	0	4	100
Specialized and teaching hospital	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: Author's fieldwork, 2010

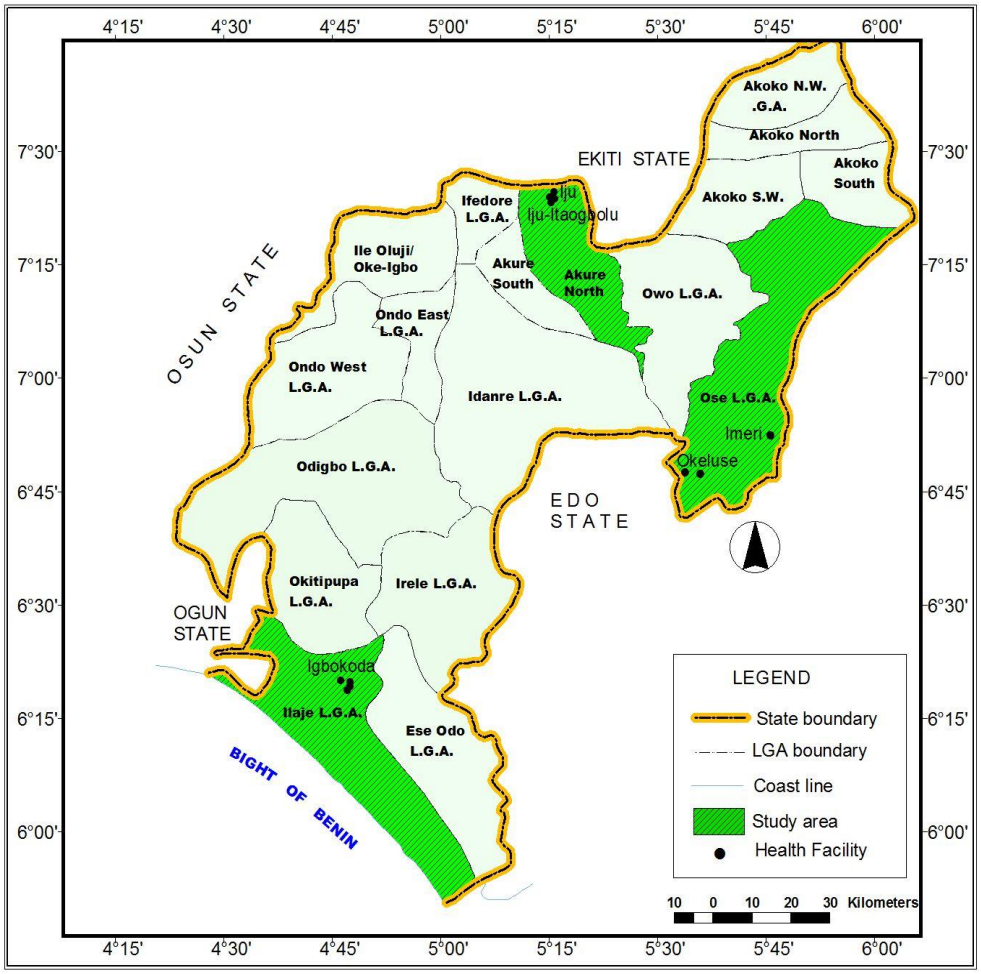

Figure 4.1 Distribution of health facilities in the study area

Sources; Minstry of Land and Survey ,Ondo State, 2010

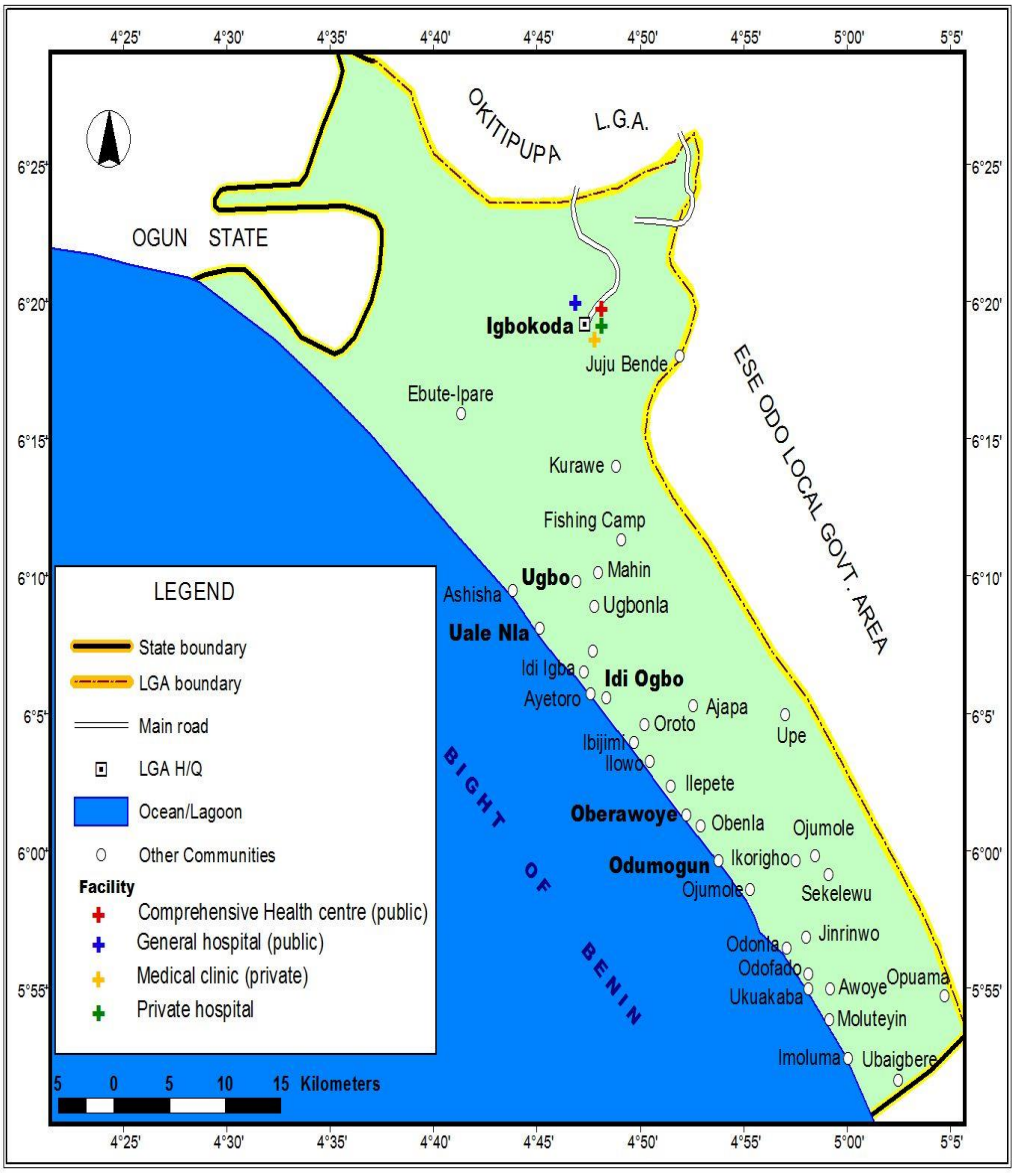

Figure 4.2: Distribution of health facilities in Ilaje LGA

Sources; Minstry of Land and Survey, Ondo State, 2010

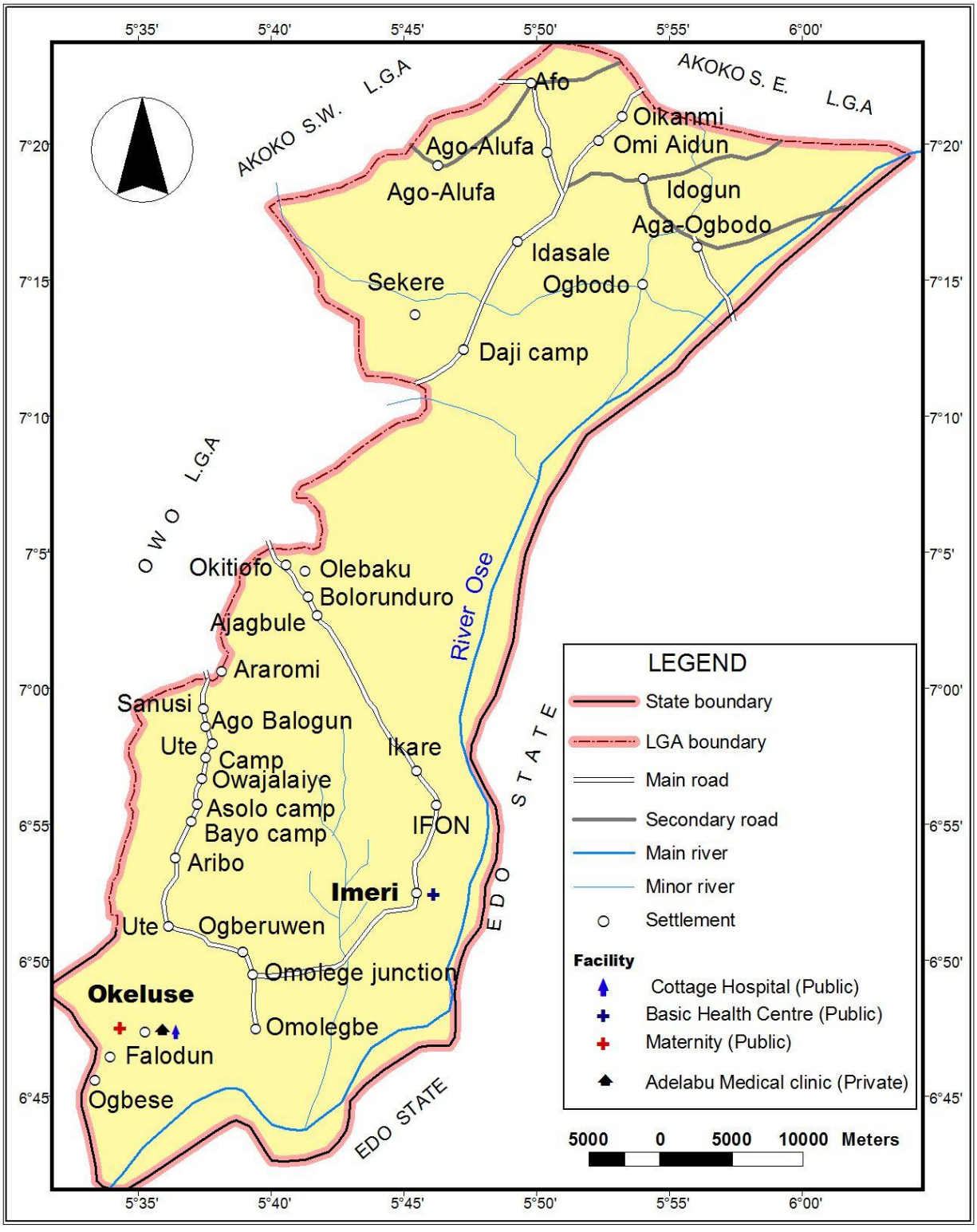

Figure 4:3 Distribution of health facilities in Ose LGA

Source: Ondo State Minstry of Land and Survey, 2010

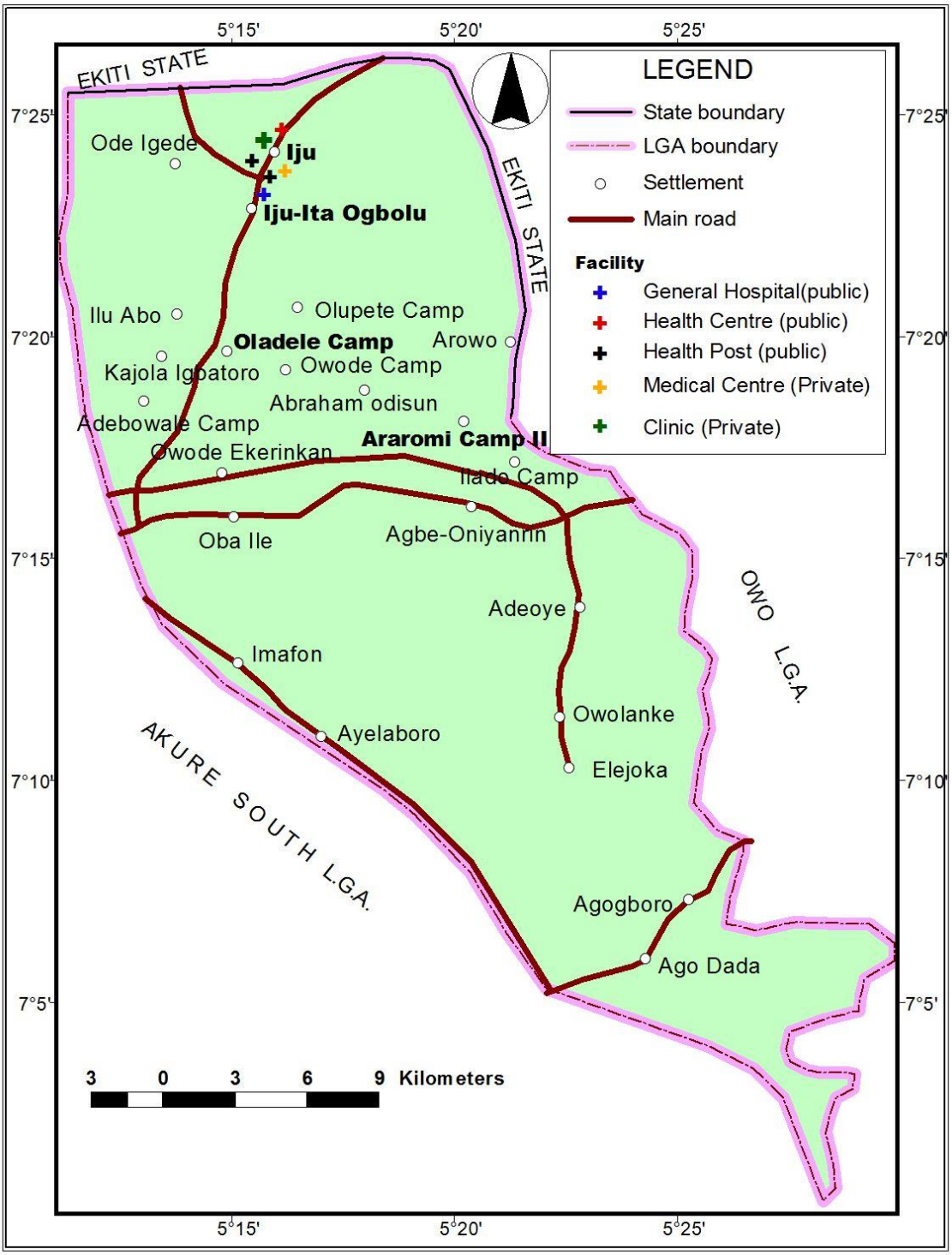

Figure 4:4 Distribution health facilities in Akure North LGA Source: Ondo State Ministry of Land and Survey, 2010

4.11.2 Annexes of Existing Health Facilities

Table 4.11.2 shows the number of annexes of existing health facilities in the study area. In all, there were four health facilities having annexes. Those facilities located outside the surveyed settlements were three, mainly for the private institutions. The government-owned health facilities were located in Igbokoda – though the annex no longer functioned at the time of the survey, and, hence, was not included. The closure of the health facility might be due to shortage of staff and basic medical equipment. The data on the number of annex health facilities are shown in table 4.11.2 below.

Table 4.11.2 Number of Annexes of existing health facilities

Facilities	***No***	***%***
Basic health center, Iju	0	0.0
Adelabu clinic, Okeluse	0	0.0
Maternity, Okeluse	0	0.0
Cottage Hospital, Okeluse	0	0.0
General Hospital, Iju	0	0.0
Comprehensive health Center, Igbokoda	1	25.0
Igbokoda General Hospital	0	0.0
Ebenezer Medical Clinic, Igbokoda	1	25.0
Health Post, Iju	0	0.0
Ayemafuge, Igbokoda	1	25.0
Ife Olu Medical Clinic, Iju	0	0.0
Adeyemi Hospital, Iju	1	25.0
Basic Health Centre, Oberawoye	0	0.0
Total	4	100.0

Source: Author's fieldwork, 2010.

Table 4.11.3 The result of NNA in the distribution of health Care facilities

Healthcare facilities in the LGA	*Observed mean distance*	*Expected mean distance*	*Z-score*	*Significant level*	*No of points*	*Result*
Akure North	0.0087321	0.001747	18.74	0.01	6	Clustered
Ilaje	0.0056777	0.000555	35.31	0.01	4	Clustered
Ose	0.004234	0.00612	21.44	0.01	3	Clustered

Source: Author's fieldwork, 2010.

The result on table 4.11.3 shows that the distribution of health care facilities in the area was clustered. This implies a high level of inequity in the facilities' distribution. It also had an important implication for facility planning and management. The inequity implied that Igbokoda (Ilaje) and Iju (Akure) would enjoy closer proximity to the location of medical facilities while other settlements were at farther proximities away from the facilities. Settlements like Iju and Igbokoda would enjoy, better, the available medical services than any other settlements in the study area. By inference, the health care delivery in Iju and Igbokoda were consequently more open to effective planning. On a general note, the results indicated that planning and management was lopsided in the study area. Otuwatuyi (2010), therefore, rightly observed that minimal provision of free hospital services at widely separated locations had effect on transferring the real cost of health care to patients through additional transport cost.

4.12.0 Catchment area

Physical access of the population to health care depend, not only on the number and locations of facilities, but also on the availability of road network and appropriate transport means to link the different units where various levels of health care were provided. According to Onokoraiye (1999), the threshold population for a particular grade of health centre was the minimum population that justified the allocation of scarce financial and personnel resources to the establishment and sustenance of that grade of health facility. On the other hand, the range of a particular category of health facilities is the minimum distance which the users will be prepared to travel to get to the health facilities. This distance range of health failities are always measured in terms of travel time or transport cost (Onokoraiye, ibid).

From the study, the catchment area was the geographical extension that satisfied the threshold requirement for the provision of different category of health care facilities; and the geographical spread involved the pattern of population density. The existing population of the settlements under study were used as the catchment area for different categories of health care facilities in the study. The theoretical standard requirement for different health care facilities was based on the population densities; these are contained in Table 4.12a. The Table 4.12a shows the area of

coverage for each catchment. As earlier indicated in this study, all the facilities in the selected settlements are considered.

From table 4.12a, the standard population that was expected for a basic health center was between 30,000 and 50,000 people within a radius of 9 to 13 km; for Comprehensive health and cottage hospital was between 100,000 and 150,000 with a radius of 13 to 19km; and for general hospital was between 500,000 and 1,000,000 people with a km radius of 31 to 47km. As for health post, it had a coverage of 4000 people with catchment radius of 5 to 9km, while maternity and clinics were to serve the same number of population 20,000, with catchment radius of 4km and 1-2km, respectively. The table 4.12a shows the results of the survey as they concerned each settlement in the study area.

If the theoretical standard already established was to be followed, based on the number of the facilities and the category each belonged, virtually all the facilities were underutilised, given the present population threshold that supposed to utilise them. For instance, there were three public facilities of varying categories in Iju, apart from private hospitals, namely Basic Health Center, Health Post, and General Hospital. With the current population of the area (19,466), maternity would be ideal for the entire settlements. In that case, the Iju settlement would then need additional population of between 6,534 and 476,534 to qualify to have a basic health center and a general hospital, respectively. Meanwhile, if population growth was a factor taken into consideration, before planning, the location of basic health center was justified but other facilities could therefore be said to be oversupplied. Normally, preventive medicine and first aid treatment can both be administered by a basic health center: general hospitals should serve a much larger population, on the other hand. Besides, in Imeri, only a basic health center was located there. With the current projected population of 3,266 for 2011, it could be drawn that the distribution of the health facilities was too much for the area. Notwithstanding, the surplus facilities still suffered underutilisation as a result of its inequitable population coverage.

Similarly, Okeluse had its total number of population as 8,223, by projection. The available health care facilities, there, were cottage hospital and maternity. If the population they must serve were considered, the facilities could be said to be underutilised. In other words, if maternity, vis-a-vis the services it should render, were

put into consideration they should be able to serve the current 2011 population, without including the cottage hospital which will serve a much larger population.

Furthermore, Igbokoda had a total population of 16,378. Meanwhile, more health care facilities sampled were skewed to the settlement. This included the General Hospital, Comprehensive Health Center, and other private facilities, such as Ayemafuge Hospital and Ebenezer Medical Clinic, which were all supposed to respond to health care demands of the people. The current Igbokoda population was almost within the threshold of 15,000 to 20,000, meaning that it can be served by a maternity center. Hence, these health facilities were underutilised, considering the threshold population for the rural area where they were located.

Oberawoye had a total population of 5,197. The population size also did not justify the location of basic health center. The population should be served by lower-order health facilities like a health post or dispensary. It could then be argued that the facilities had also been underutilised. However, the reverse was the case in Ugbo, which was one of the control settlements for the study. No health facility of any kind was located in Ugbo. But the survey revealed that the people patronised Ugbonla Health Center which did not fall within the coverage of the study area. It could be said that the health facilities in Oberawoye and Ugbo were inefficiently and inadequately planned. Meanwhile, health services that required referrals might not be easily attended to by the expected facilities, the higher-order facilities, located within the rural area. Other factors that might explain the poor health facility planning and distribution could be political. In addition, this factor could account for the shortage of health manpower to handle and manage the facilities.

According to WHO (1985), some unawareness of the defined and designed functions of a particular health care unit led to the duplication of services and lack of coordination between them. Onakhoraiye (1999) also stated that it was easier to attain threshold population for the three-tier health care facilities in most urban centers, but it was difficult in the rural areas where settlements were quite small (in terms of population size) and transport facilities were poorly developed or non-existent. The expected number of facilities that needed to be allocated to the study area is given in Table 4.12b.

Table 4.12a: Population standard to be served and radius of catchment areas for the health facilities in the study area

Facilities	*Location*	*Based Population 1991*	*Existing Pop.2010*	*Population Standard Required*	*Shortfall*	*Non-compliance*	*Radius in Km*
General Hospital	Iju	14679	19,466	500,000-1,000,000	-476,534	√	31 -47km
	Igbokoda	10245	16,378		-483,622		
Comprehensive health centre	Igbokoda	10245	16,378	100,000-150,000	-83,622	√	13-18km
Cottage	Okeluse	5144	8,223	100,000-150,000	-91,777	√	13-19km
Basic health centre	Iju	14679	23,466	30,000-50,000	-6,534	√	9-13km
	Imeri	2043	3,266		-26,734		
	Oberawoye	3,251	5,197			√	
Maternity/ Clinic	Okeluse	5144	8,223	15,000-20,000	-6,777	√	2-4km
	Iju	14679	23,466	15,000-20,000	8,466	√	1-2km
	Okeluse	5144	8,223		-6,777		
	Igbokoda	10245	16,378		1,378		
Health Post	Iju	14679	23,466	4,000	19,466	√	5-9km
Private Hospital	Iju	14679	23,466	As in Gen. Hospital	-476,534	√	31-47km
	Igbokoda	10245	16,378		-483,622		

Author's field work, 2010
Note, √ represents Non Compliance
Note, standards adapted from vagale 1971

Table 4.12b: Expected facilities as at the time of the study

Settlement	*Existing Population 2010*	*Existing Facilities*	*Expected Facility*					
			Health Post	**Clinic/ Maternity**	**Basic Health centre**	**Comprehensive Health**	**Gen. Hospital**	**Private Hosp**
Iju	1,9466	Health Post, Clinic, Basic Health centre, General Hospital and Private Hospital		2	1	-	-	-
Araromi camp	1072	NA	2	-	-	-	-	-
Oladele camp	674	NA	2	-	-	-	-	-
Imeri	3266	Basic Health centre	1	-	-	-	-	-
Okeluse	8223	Maternity, Clinic	2	1	-	-	-	-
Idi Ogba	5539	NA	2	-	-	-	-	-
Ugbo	3541	NA	1	-	-	-	-	-
Uale Nla	1010	NA	2	-	-	-	-	-
Igbokoda	16378	Clinic, Comprehensive Health centre, General Hospital and Private Hospital	5	1	1	-	-	-
Odumogun	1109	NA	-	-	-	-	-	-
Oberawoye	5197	Basic health centre	1	-	-	-	-	-

Author's field work, 2010

Note, * represents no short fall while √ represents Non Compliance

Note, standards adapted from Vagale 1971

NA, Not available

4.12.1 Distance of the facilities by planning

With regard to distance to health care facilities, which was referred to as range in Cristaller (1966), economic and geographical distances are very important in the planning and management of health care facilities. WHO has set a minimum distance standard that will be covered before health seekers can be said to be overstretched as 5km. The economic distance should be measured in terms of time and cost. The standard (maximum) time that should take patients to reach health facilities, otherwise any time above it would be considered to have some negative effect on the patients, is 30 minutes which is the travelling time. The standard cost of covering the distance to health facilities can be determined by the prevailing economic situation as it affects the patients in question. The Table 4.12.1 shows the result of the survey as it bothered on distance, time and cost for the respondents.

In Table 4.12.1, 744 (75.2 percent) stayed less than 5km from health facilities; 163 (16.5 percent) stayed 5km away from health facilities; 14 (4.7 percent) stayed 10km away; 17 (1.7 percent) stayed 20km away; and 19 (1.9 percent) resided at more than 20km away from health care facilities. According to Onokerhoraye (1981), distance was a major variable in determining the intensity of relationship between various sets of phenomena distributed in space. Therefore, any facility that is centrally located will draw consumers from the immediate surrounding, unless political and ethnic frictions cause otherwise (Morll & Erickson, 1969). The implication of the result of the facilities' location with reference to distance was that health facilities would enjoy more patronage by a high proportion of the respondents (75.22 percent). In other words, the population area might not be poorly served since its high percentage was located below 5km from the health facilities. On a general note, it can be said that the area enjoyed a noteworthy degree of health facility planning, in terms of facility location in the walking radius of the people.

However, the variation across the settlements shows that out of 16.5 percent respondents that resided exactly 5km from health facilities 50 (63.3 percent) resided in Idi-Ogba, while there were no responses from Araromi Camp II and Ugbo. Three (30.0 percent) of the respondents resided far away from the facilities in Oladele & others, 10km distance away. The response gradually declined for those who stayed 20km away from health facilities. In Uale Nla, Imeri and Oladele & others, people seemed to live close; so, there were no responses. However, in Odumogun two (12.5

percentage high) respondents indicated they covered 20km distance to reach health facilities. For above 20km coverage, the percentage of respondents was low: 19 resondents (1.9 percent) in Odumogun. Another highest coverage, nevertheless, was from Araromi Camp II with two respondents (13.3 percent), crossing 10km to reach health facilities.

From the analysis above, the location planning of health facilities was done with strict adherence to statutory law. Specifically, health post facility was supposed to bring health services closest to the people, particularly the people in the remotest communities where there had been no health facilities of any type. Olujimi (2003) has contended in this respect that location of health institutions at a proximity to places of abode of rural households often affected the degree of awareness, attractiveness, and consequently, utilisation of the facilities.

Table 4.12.1 Distances of the facilities to respondents' residence

AREA	*LESS THAN 5KM*		*5KM*		*10KM*		*20KM*		*ABOVE 20KM*		*PERCENTAGES*	
Igbokoda	163	70.0	49	21.0	13	5.6	3	1.3	5	2.1	233	100.0
Ugbo	43	86.0	2	4.0	0	0.0	1	2.0	4	8.0	50	100.0
Uale Nla	7	50.0	6	42.9	1	7.1	0	0.0	0	0.0	14	100.0
Oberawoye	56	75.7	10	13.5	4	5.4	1	1.4	3	4.1	74	100.0
Idi Ogba	19	24.1	50	63.3	7	8.9	1	1.3	2	2.5	79	100.0
Odumogun	8	50.0	5	31.3	1	6.3	2	12.5	0	0.0	16	100.0
Iju	281	83.9	33	9.9	12	3.6	7	2.1	2	0.6	335	100.0
Araromi camp II	10	66.7	0	0.0	2	13.3	1	6.7	2	13.3	15	100.0
Oladele & others	6	60.0	1	10.0	3	30.0	0	0.0	0	0.0	10	100.0
Okeluse	111	94.9	3	2.6	1	0.9	1	0.9	1	0.9	117	100.0
Imeri	40	87.0	4	8.7	2	4.3	0	0.0	0	0.0	46	100.0
Total	744	75.2	163	16.5	46	4.7	17	1.7	19	1.9	989	100.0

Source:Author's fieldwork, 2010.

4.12.2 Respondents on time spent to reach facilities

The data on respondents on time spent to reach health facilities is captured in Table 4.12.2. Time, as the variable considered, was calibrated into four: less than 30 minutes; between 30 minutes to 1 hour; between 1 hour and 30 minutes; and between 1 hour 30 minutes and 2 hours. By standard, a patient should not wait for a vehicle for more than 30 minutes before getting to the health facility to receive health care

service (WHO, 2000). The longer the patients wait for a vehicle before getting to the facility for treatment, the more deteriorating their health conditions might become. Considering the table, 270 (69.59 percent), more than half of the respondents that patronised health facilities (388 in all) spent less than 30 minutes before getting to the facilities. In this category, Odumogun had the highest respondents nine (90.3 percent). Seventy-one (20.10 percent) of the respondents spent between 30 minutes to 1 hour to reach the facilities, with Ugbo, Idi-Ogba and Imeri having 8, 15 and 6 (28.57, 44.83 and 27.27 percent), respectively, in this second category. This second range distribution was significant when compared with Uale Nla, Odumogun, Iju and Araromi Camp II. Uale Nla, Odumogun, Iju and Araromi Camp II had 1, 1, 18 and 1 respondents (14.29, 10.0, 13.95 and 14.29 percent), correspondingly, who spent 30 minutes to 1 hour to get to the health facilities.

As for those who spent exactly 1 hour 30 minutes, 3 (42.86 percent) respondents were from Uale Nla; and three (5.00 percent) were from Okeluse. Some settlements had as low as one (0.78 percent) respondent, and others did not have respondents who spent that much time at all. Moreover, one (5.41 percent) of the respondents indicated they spent between 1 hour 30 minutes and 2 hours to get to health facilities. While those who spent 1 hour 30 minutes in Idi-Ogba, Imeri, Igbokoda, Okeluse and Ugbo had high percentages, with 3, 2, 85, 2, 4 and 2 (10.34, 9.10, 8.24, 6.67 and 7.14 percentages) respectively, the two (1.55 percent) respondents were low in Iju, and others did not respond. The time spent in distribution, according to settlements, is shown in Table 4.12.2.

The case of those that get to the health facilities in less than 30 minutes might be as a result of good transportation. Those that spent more than 30 minutes might be affected by the poor road network that impeded ease of vehicular passage to health facilities. Nevertheless, the few transport modes could restrict the choices of respondents to inefficient modes (or means). Generally, it can be said that health facility patronage were enjoyed, consequent upon proper planning for health facilities in relation to their locations within the relatively convenient reach of the people.

Table 4.12.2: Travelling time (period) spent to the health care facilities

AREA	*LESS THAN 30 MINUTES*		*30 MINUTES – 1 HOUR*		*1 HOUR, 30 MINUTES*		*1 HOUR 30 MIN – 2 HOUR*		*PERCENTAGE*	
Igbokoda	68	80.0	9	10.59	1	1.18	7	8.24	85	100.0
Ugbo	15	53.57	8	28.57	3	10.71	2	7.14	31	100.0
Uale Nla	3	42.86	1	14.29	3	42.86	0	0.00	7	100.0
Oberawoye	14	51.85	8	29.63	4	14.81	1	3.70	27	100.0
Idi Ogba	9	31.03	13	44.83	4	13.79	3	10.34	29	100.0
Odumogun	9	90.00	1	10.00	0	0.00	0	0.00	10	100.0
Iju	88	68.22	18	13.95	1	0.78	2	1.55	101	100.0
Araromi camp II	6	85.71	1	14.29	0	0.00	0	0.00	7	100.0
Oladele & others	3	75.00	1	25.00	0	0.00	0	0.00	4	100.0
Okeluse	41	68.33	12	20.00	3	5.00	4	6.67	59	100.0
Imeri	14	63.64	6	27.27	0	0.00	2	9.10	22	100.0
Total	270	69.59	78	20.10	19	4.90	21	5.14	388	100.0

Source:Author's fieldwork, 2010.

4.12.3 Respondents on average cost per trip to facilities

The data in Table 4.12.3a shows the average cost per trip (to and fro) made by respondents in order to receive health care services. Ideally, in the rural area, the transport fare of patients and that of patients' relations that accompanied them to health facilities for treatment were put together as the travel cost. Thus, a high cost could discourage the rural households from patronising the health facilities. From the Table 4.12.3a, 151 (38.92 percent) respondents spent between 50 and 100 naira, rating higher than those that spent less than N50 who were 95 (24.48 percent). Similarly, 112 (28.87 percent) of the respondents spent over N250, to and fro the health facilities. Those that spent between N101-N150 and 151-N200 were, however, the lowest - 14 (3.61 percent) and 16 (4.12 percent), respectively.

In spite of the number of health seekers who never spent money and those who spent less than N50.00 on transport fares to health facilities, the proportion of those enjoying accessibility in terms of money to health facilities was still very low. Odumogun and Araromi Camp II had seven (70.00 percent) and 5 (71.43 percent) respondents respectively that spent between N50 and N100 per trip. One (14.29 percent) and 3 (10.34 percent) from Ugbo and Idi Ogba, respectively, spent between

N101 and N150. The percentages of those that spent over N250 varied across the settlements, as shown in the Table 4.12.3a. Uale Nla and Odumogun had three respondents (42.86 percent) and three respondents (30 percent) respectively, for instance. This variation can be explained in the fact that these same settlements had to cross waterways with canoes and speedboats, before reaching the motorable road. In addition, an increase in the price of fuel ultimately causing high transport fares, could also tell on spending higher or above N250 to reach health facilities. Generally, in the riverine settlements of the study area transport costs were high. The study area was an oil-producing part of the State, Ondo, as earlier noted. Some transporters might imagine that the local residents were rich and raise prices of goods and services, including transportation. This definitely would have effects on the rural people's health that really were poor and could not afford the relatively exorbitant fare in the area.

Table 4.12.3a: Average cost per trip (to and fro) made by respondents to receive healthcare

AREA	*< THAN N50 PER TRIP*		*50 – 100*		*101 – 150*		*151 – 200*		*0VER 250*		*PERCENTAGE*	
Igbokoda	30	35.29	35	41.18	3	13.53	4	4.71	13	15.29	85	100.0
Ugbo	5	17.86	6	21.43	4	14.29	2	7.14	11	39.29	28	100.0
Uale Nla	1	14.29	2	28.57	0	0.00	1	14.29	3	42.86	7	100.0
Oberawoye	5	18.52	3	11.11	1	3.70	2	7.41	16	59.26	27	100.0
Idi Ogba	5	17.24	17	58.62	3	10.34	0	0.00	4	13.79	29	100.0
Odumogun	0	0.00	7	70.00	0	0.00	0	0.00	3	30.00	10	100.0
Iju	23	21.10	54	49.54	2	1.83	4	3.67	26	23.85	109	100.0
Araromi camp II	2	28.57	5	71.43	0	0.00	0	0.00	0	0.00	7	100.0
Oladele & others	2	50.00	2	50.00	0	0.00	0	0.00	0	0.00	4	100.0
Okeluse	13	21.67	17	28.33	0	0.00	2	3.33	28	46.67	60	100.0
Imeri	9	40.91	3	13.64	1	4.55	1	4.55	8	36.36	22	100.0
Total	95	24.48	151	38.92	14	3.61	16	4.12	112	28.87	388	100.0

Sources: Author's fieldwork, 2010

Table 4.12.3b Correlation Table for Hypothesis 3

		Patronage
Proximity	Pearson Correlation	-.188*
	Sig. (2-tailed)	0.000
	N	989

* Correlation is significant at the 0.01 level.

The correlation coefficient of -0.188 (P < 0.01) shows there was an inverse relationship between proximity and patronage of health facilities by the respondents, across the surveyed settlements. In other words, the longer the distance to a facility was, the less the patronage by the sampled population. This was in agreement with the concepts of the range of goods and distance as implied in the Central Place Theory of Walter Christaller (1933), and it established the relevance of planning of health care facilities. Indeed, distance is important in determining complementary regions when they are measured in terms of travel time or of transport cost. Economic distance determines the range of goods and services. This range of a particular category of health facility is the maximum distance which the users are prepared to travel to reach health facilities.

4.12.4 Medical personnel by catchment area

One other aspect to catchment area of health facilities is the number of staff that a facility can accommodate. Countries and local communities varied, widely, in their approaches to the allocation of health facilities and facilities' personnel. Moreover, different kinds of health facilities have different staffing patterns. Unsurprisingly, hospitals and other higher-order health facilities are better staffed by more qualified health workers than lower-order facilities (KSPA, 2004). This subsection deals with the distribution of medical staff in the catchment areas of the study area.

Regarding the distribution of medical staff in the study area, this was determined in terms of: the ratio of population to a doctor; the ratio of population to a nurse; the ratio of a doctor to nurses; and the ratio of population to an auxiliary nurse. Since the main catchment areas for the existing facilities were the settlements, their

projected populations were used to determine the shortfall and the required standard, vis-a-vis the existing health facilities.

The standard requirement of a doctor to population is 1: 600, while the ratio of nurses to population is 1: 500 (WHO, 1995). The existing ratio of auxiliary nurses to population based on standard does not exist in literature. The ratio of nurses to population in the study area is presented in Table 4.12.4. Considering the population of 19,466, it could be observed that the existing facilities sampled in Iju, besides private hospitals, had a shortfall of 35. It meant that three nurses were available at the ratio of 1: 500. Meanwhile, if the standard ratio were considered, the expected number of nurses needed for the facilities will be 74. Imeri had a total population of 3,266. Given the number of nurses available in the facilities studied, there was a shortfall of 4. The implication was that the nurse would have to share the existing workload. The actual number of nurses needed was 11. In Okeluse, the total number of population was 8,223 with a shortfall of 13. Meanwhile, the expected standard number of nurses required to make up for the shortfall was 30.

However, in Ugbo which fell within the sampled settlements had no single nurse present. This may not be surprising, as the settlement fell within the control settlement having a total number of 3,541 populations. If the ratio to threshold population was considered, it would require 8 nurses for the area. In Igbokoda, 16,378 people to a nurse showed a shortfall and indicated the ratio of people who would suffer the need of nurse; the expected number of nurses required was 33. In comparison, Iju health facilities seemed to employ more nurses than the other settlements. Oberawoye had a population of 5,197; considering the standard nurses to population ratio it required 11 nurses.

Tables 4.12.4 (A and B) show the result of the survey of doctor to population ratio in the study area. From the tables, the number of doctors present in Iju vis-a-vis the population showed a shortfall of 27, indicating that 59 doctors would be needed if the accessibility ratio of doctor to population required in the existing facilities in the area were considered. In Imeri, there was a population shortfall of 3, given a required number of nine doctors. Okeluse had a shortfall of 13 as 2 doctors were available in the existing facilities. The needed number of doctors was 27 if the ratio were to be considered. Igbokoda had a population of 16,378 with a shortfall of 21, indicating an acute shortage of medical doctors. But when compared with other settlements in terms

of distribution, Igbokoda had advantage over other settlements having up to 4 doctors out of the required 48 medical doctors in the area. For Oberawoye, the total number of population was 5,197, showing an expected number of nine doctors.

Another aspect of the medical staff distribution over catchment areas, as it affected planning of health care facilities in the study area, is doctor to nurses ratio, which is 1: 4 (World Bank, 2010). Nurses are needed to carry out various tasks in doctor's offices, clinics and hospitals. By utilising nurses to carry out basic health service duties, doctors are able to perform more complex services leading to reduced overall costs. From the facilities studied, there were few or no doctors in the settlements. This definitely affected the doctor to nurse ratio. If the required number of doctors needed were 32, giving a shortfall of 35 in the area, then the expected number of nurses to one doctor would be 74. In Imeri, the shortfall of doctor for the settlememt was four, meaning that the required number of nurses to a doctor should be 11. Igbokoda had a shortfall of 10; by inference, it would require as much as 43 doctors. Tables 4.12.4 and 4.12.15 show the distribution of doctors across the wards in the study area.

Private hospitals operated mainly with the assistance of auxiliary nurses. The ratio of the auxiliary nurses to the population in the area was high. For instance, Iju had a ratio of 1,067: 1; Imeri had a ratio of 148: 1; Okeluse 373: 1; Oberawoye 236: 1; and 744: 1 for Igbokoda. The auxiliary nurses were only found in the private clinics, implying that existing facilities' operators might either not be able to afford the payment of well-trained staff, or due to shortage of health personnel, would then decide to embark on training the auxiliary nurses. Consequently, private hospital owners might in the long run reduce the auxiliary nurses' salaries and maximise profits, an important objective of private health establishments. Certainly, this might have implication for quality health care services. Adejuyigbe (1973) argued that one of the reasons for attendance at each medical center in Ile-Ife town was the facility type and services available.

Generally, the distribution of medical staff, in the wards, reveals a high level of poor planning of the health facilities. Most rural areas had higher-order facilities meant for urban settlement, making the facilities understaffed by medical personnel. As noted earlier on, explaining the development could be some political motive. With understaffed health facilities, accessibility to needed health services would be

difficult; therefore, people would have to travel far beyond the maximum distance range to get medical care. Improper planning can so, really, be a bane to a comprehensive health care delivery system.

Table 4.12.4: Doctor population ratio and nurses doctor ratio

Name of Settlement	*Base Population 2010*	*Number of Existing Doctors*	*Doctors population Ratio*				*Nurses Doctor ratio*
			No of existing Dr/population ratio	**Expected Number of Doctors**	**Short fall in num of Doctors**	**Standard ratio**	**Expected standard**
Iju	19,466	5	1:389	36	27	1.4	184
Araromi camp	1,072	0	0	2	2	1.4	-
Oladele camp	674	0	0	2	2	1.4	-
Imeri	3266	3	1:1089	6	3	1.4	20
Okeluse	8223	1	1:8223	14	13	1.4	20
Idi Ogba	5539	0	0	10	10	1.4	-
Ugbo	3541	0	0	6	6	1.4	-
Igbokoda	16378	6	1:2730	27	21	1.4	108
Oberawoye	5197	1	1:5197	9	8	1.4	36
Uale Nla	1010	0	0	2	2	1.4	-
Odumogun	1109	1	1:1109	2	1	1.4	-

Source: Author's field work, 2010
Note-1: 600 Doctor /Population standard ratio was adapted from WHO, 1985

Table 4.12.5: Nurses population ratio

Name of Settlement	*Base Pop. 2010*	*Number of Existing Nurses*	*Nurses Population ratio*	*Expected Number of Nurses*	*Shortfall of the number of Nurses*
Iju	19,466	4	1:4867	39	35
Araromi camp	1,072	0	0	3	3
Oladele camp	674	0	0	2	2
Imeri	3266	3	1:1089	7	4
Okeluse	8223	4	1:500	17	13
Idi Ogba	5539	0	1:2056	12	12
Ugbo	3541	0	0	8	8
Igbokoda	16378	23	0	33	10
Oberawoye	5197	3	1:712	11	8
Uale Nla	1010	0	1:1732	3	3
Odumogun	1109	0	1:4867	3	3

Source: Author's field work, 2010
Note- 1:500 Nurse/population standard ratio adapted from WHO, 1985

4.13 Health care financing and budgetary allocation

According to NPHCDA (2001), health care financing was the underpinning of health care delivery system; a carefully thought out, formulated and implemented financing mechanisms was necessary for the success of the health care system. In this study, the financing options included fund raising and donations from philanthropists, industries, community groups, and cooperative societies (micro-credit facilities provision). According to FMOH (2004), in the past, the budget was a paper exercise and no one paid any attention to it all. The truth was that the real cost of health services was unknown because there was no system for national health accounts (NHA). There were no reliable data or information on the combined federal, state and LGA expenditures, nor on expenditures of private and donor sources. There was no broad-based health care sector financing strategy, even with the planned commencement of a National Health Insurance Scheme (NHIS).

In the area of the study, Ose LGA generated funds for use in all the aforementioned ways, except through industries; Akure North generated from the state or federation account; while Ilaje depended on fund disbursed from the LGA. It shows clearly, therefore, that apart from Ose who utilised other funding channels, the others had a total reliance on the disbursement from the federation account. The implication was that what would be allocated to each sector of the economy was planned with the limited financial resources available. To be sure, this eventually would affect the percentage share for the health sector, thus crippling the performance of the service providers. The poor health sector financing explained why there were complaints about shortage in the modern equipment by the users. Even the chairman of Ose LGA submitted that "in spite of other available funding sources, the target of effective health care delivery in terms of financing has not been met". The resultant effect was a gradual transfer of the financial responsibility to individuals and households, as indirect and major sources of health care financing in the country (NPHCDA, 2001).

The data on health care financing in the surveyed three LGAs is shown in Table 4.13.1. Regarding the sources of health care financing in the LGAs, a good number of options were made available such as government allocation, user charges, donor contributions, and voluntary organisations' health insurance loans. From the table 4.13.1, it is clear that the sources of finance for health care were, predominantly, through government allocation and user's charge (these applied to all the LGAs). However, while Ose and Akure North LGA depended on donor contributions outside government allocation, Ose also received donations from voluntary organisations and took loans (micro-finance credit). The user charge policy had been introduced in all the LGAs and could be used as a surrogate for health care financing. It was also clear from the study that the user charge policy varied across the study area – in particular, the sampled LGAs. Furthermore, in spite of the policy, the government seemed to be the major source of health care financing because even the user charges, in the LGAs, were quite minimally low to depend on for effective service delivery. Again, the minimal user charge did breed an inimical implication for the quality of care (see table 4.13.1 for the schedule of fees across the LGAs too).

Health care facility's sustainability is expected to be the outcome of the planning and management. Sustainable health care sector development means that

pace, direction and magnitude of health care development must be such that can be maintained over a period of time (UNCHS, 2000). Responses on the sustainability of health facilities varied in all the LGAs sampled. For instance, in Akure North LGA, it was confirmed that health facility planning had been sustained through supportive supervision, participatory supervision, the use of checklist, protocols and viewing every issue against subsequent plans. In Ose LGA, it was argued that the secondment had not been encouraging individual development, academically, in order to enhance manpower production. In this case, sustainability was tied to manpower development while funding was seen as a way of ensuring health facility planning and sustainability.

All the variables considered for health care facility and system sustainability, according to UNCHS (2000), demanded that all stakeholders in the city must be involved and consulted. There must be programs to increase income-generating activities that would enhance employment and reduce poverty. Facilities, infrastructures and amenities, as argued, must be maintained to ensure their durability in the city. Although part of the issues considered were partly mentioned, they did not meet the basic standard for health care system sustainability, as designed by UNCHS (2000). FMWH (2000) rightly observed that poor maintenance was the bane of many Nigerian cities, and this quickly led to deteriorating and low performing infrastructures, which posed critical problems to sustainability.

Table 4.13:1 Sources of healthcare financing in LGA

L.G.A	*Govt. Allocation*	*Users charges*	*Donor contributions*	*Voluntary organization*	*Health insurance*	*Loans*
Ose	1	1	1	1		1
Akure	1	1	1	2	2	2
Ilaje	1	1	2	2	2	2

Source: Author's fieldwork, 2010

Table 4.13.2: Cost of healthcare services in naira

L.G.A	*Card*	*Consultation*	*Investigation*	*Inpatient care*	*Drugs*	*Antenatal care*	*Family planning*	*Immunization*	*Out patient care*
Ose	20 – 50	100	200 - 1000	500	Depends	100 – 150	100	Free	200
Akure	200	Depends	Depends	Depends	Not free	Free	Free	Free	
Ilaje	100	No response	Variable	No response	No response	300	No response	No response	Variable

Source: Author's fieldwork, 2010

*Note, variable means it varies.

Policy for exemption has a significant effect on the accessibility of health care by the patients. This is owing to the status of utilisation of health facilities. When the fund available to health facilities increases, it brings a positive effect; but the effect is negative by deterring poor patients from using services (Kibaru, 2004). The data obtained revealed that there existed a mechanism for exemption of certain groups from payment for medical services in the state and the payment implementation varied from one LGA to another. In Akure North and Ilaje LGAs, only children under five years and pregnant women were exempted from the payment for health care services. The exemption was practised differently in Ose LGA: it rather favoured the extremely poor orphan. From the accounting department of the LGA, payment approach was discretional and funded through the internally generated revenue. By implication, the payment scheme for vulnerable groups would help in augmenting inadequate facility budget. However, according to KSPA (2004), providing exemptions or discounts for the poor users could result in budget shortages, if there was no system for reimbursing those exempted or discounted costs.

The children exemption policy had a major impact on reinforcing the labour force and sustenance of community. WHO (1999) estimated that over 10 million children, under five years of age, died annually as a result of preventable diseases. WHO (1999) also argued further that many sick children who were brought to see a health provider did not receive adequate assessment or treatment. This had a great implication for quality health care.

Table 4.14.2 presents the data on budgetary allocation for the health care sector in the last five years in the study area. From the table, it is clear that the amount

of money allocated health care delivery in the area, which eventually would be re-allocated, was quite low, in comparison to the ones in other developing countries. There were increases, yearly, except in 2006 when there was a shortfall; but the allocation was picked up the following year. With the current funding by the State, by the time of this study, it was expected that the community should have a feel of improved health care delivery. However, in the study, it can be seen that most of these allocations had not yielded any meaningful impact on health care planning and management. Also, more of this money was spent on recurrent capital projects that had no direct impact on quality and efficient health care delivery and sustainability. In this regard, FMOH (2006) estimated that the total cost of the strategies enumerated for improving access to quality health services would be 5 billion naira. It was envisaged that funding for this component of the HRS program would derive from government budgets and development partners' contributions. The total amount disbursed was far low compared with the average national standard. For instance, the disbursement was 2.091 billion naira in 2009, in Ondo State.

Furthermore, corruption could also be identified as a reason why the disbursed fund could not transform into meaningful health impact for the people. This was noted in the lack of transparency, as the sampled LGAs found it difficult to specifically state the amount committed to health care deliveries in their respective LGAs. In a campaign for good urban governance, FMOH (2006) articulated that in the LGAs, the problems identified were the influence of vested interests, cronies, whose financial dealings with local governments often went unreported. According to FMOH (2006), the silence of the community on the issue which reinforced the problem and lack of transparency on the part of the state and federal governments eventually set a bad precedents for LGAs and had corrupting influence on vested groups.

Table 4.13.3: Budgetary allocation to health in the State between 2004-2009

Year	*Allocation (Naira)*
2004	134.5million
2005	715.49million
2006	223.57million
2007	582.58million
2008	980.120million
2009	2.091 billion

Source: Computed from the annual budget of Ondo State, Department of Research and Statistics, Ministry of Finance, Ondo State.

4.14 Government and other organizations' involvement in health care delivery

With respect to mechanism for coordinating the activities of governmental, non-governmental and international agencies in the study area, all the LGAs agreed on the coordination activities of governmental, non-governmental organisations, and international agency, except Akure North LGA. It would not be surprising that a lot of health projects were implemented in the area, for instance, by WHO, UNICEF and ADOC. These organisations were involved in the programs of immunization and ochonciasis, and they financed the programs. Other sectors other than health that collaborated actively in planning and implementation included Ose LGA Department of Works which concentrated mainly on infrastructure (building); Akure North LGA Communication Department and Agriculture Department, National Orientation Agency, and State Security Service were involved in health awareness and health education. In Ilaje LGA, none of these developments was replicated (see table 4.14.1).

Only Ose LGA had benefited in terms of technical assistance from the NGOs. What was done was pro-health intervention. From the foregoing, it could be deduced that more health activities and programs were organised in Ose and Akure North LGA than in Ilaje. Therefore, one would have expected that health impact should be felt more in the other LGAs exempting Ilaje. Unfortunately, the earlier table result shows the same pattern or trend of poor health in the study areas, with the poor conditions about the health facilities (see table 4.14.2).

The roles of NGOs/Donor agencies in the planning and management of health facilities in the state had been to ensure proper implementation of their health programs through proper monitoring and evaluation. They sought to know what was

the outcome and impact of health care donations made. The PHC coordinators in Ose and Akure North LGA stated that the NGO/Donor agencies' monitoring and evaluation would enable them identify what should be done to maximise the achievement of the programs' objectives in the health care system. In Ilaje, their roles had been on intervention programs of free health through diagnoses and treatments and supply of Insecticide-Treated Nets (ITNs) and free eye glasses. By implication, the program was supposed to have assisted in the area of transparency and accountability which was very important to planning and management of the health services delivery. However, no matter the contribution of the donor agencies, the impact would still be restricted by what they supplied and in what amount. Meanwhile, the LGA health programs would still be at the mercy of the policy makers and health care providers.

For the area where the activities of the NGOs or donor agencies were seen (Akure North, in particular), the survey revealed that there were constituted committees who included the WHO officials, Permanent Secretary of the Ministry of Health and Directors of Primary Health Care Program in the Akure North LGA. Furthermore, at every meeting, deliberations were said to be mainly on programmes which looked at the aggregate challenges, and then through report writing, evaluation and analysis of health programme decisions being reached on effective ways of delivering their health services.

Table 4.14.1: Mechanism for coordinating governmental, non governmental and international agency in the LGAs

L.G.A	*Sector 1*	*Sector 2*	*Sector 3*	*Sector 4*	*Project 1*	*Project 2*	*Project 3*	*Project 4*
Ose Akure	Communication dept.	National orientation agency	State security service	Agriculture				
Ilaje	Community dept.	Work			Building infrastructures			

Source: Author's fieldwork, 2010

Table 4.14.2: Enumerate all NGOs contributing the same way and type of contribution

L.G.A	*NGO1*	*NGO2*	*NGO3*	*Project1*	*Project2*	*Project3*	*Financial 1*	*Financial 2*	*Financial 3*
Ose	IBA	Unicef	WHO	Borehole	Borehole	Heath centres	1000000	2000000	
Akure	WHO	Unicef	ADOC	Immunization	Immunization	Ochociosis control	Self	Self	Self
Ilaje									

Source: Author's fieldwork, 2010

4.15 Planning strategies in health care facilities

The planning strategies involved in health care facilities and delivery have a significant role to play in determining the accessibility of the people to health care services. In the context of this study, planning is taken as a process of choosing priority interventions in the pursuits of a general sustainable development. The health development strategies vary from one place to another, even within the same local area, as also asserted by REPOA (2005). Thus, the administrative level, where the identification of developmental issues and prioritisation is done becomes critical. Where and how the identification and prioritisation are done will distinguish between the top-down from the bottom-up approaches. During this study, all the policy makers (state government, local government and private owners) agreed on the use of the top-down approach. This implied, in part, that the health needs and wishes of people were not factored in the planning, since there should be consultation with the people being planned for. Table 4.28 indicates a planning in the wrong direction, in discordance with the bottom-up approach. REPOA (2005) confirmed that there would be poor ownership of not only the process, but the outcome of the health care planning also.

In achieving the participatory planning, the communities had to participate in the discussion of their problems and set priorities. Among the surveyed three LGAs, only Ilaje submitted that their meetings were not regular. As earlier discussed; routine meetings with the people at the grassroot impacted on the functionality of the health care system. Referring to the other LGAs-Ose and Akure North, the immense contribution the communities would have offered in the planning of the health care

facilities in routine meeting had been hindered, definitely. UNEP (1987) accentuated this fact when he argued that a continuing and dynamically evolving process should be established for the purpose of making the urban developmental policy formulation and implementation progressively more responsive to environmental considerations, in institutionalising environmental planning and management (cited in Wahab, 2006). It was agreed by all the LGA chairmen that everybody, particularly the villagers, was incorporated into action plans with the wards', districts' and national priorities. That is, the health care system planning was centered on the priority needs of the people, consequently ensuring citizen participation.

One of the questions explored in this survey was how the health care plans were carried out. This question dealt with whether the plans were centrally made, relied on information, or based on uniform assumptions about the people. None of these probable options were agreed to by the LGAs. People had been aware of participatory planning. Anything short of participatory approach is characteristic of the top-down approach, and may not benefit the majority of the populace (Rud quist & Burrkey, 2006).

Indeed, information capacity building is one of the basic features of planning and management. According to Wahab (1998), building up local capacity in the public, private and popular sectors was very crucial to not only maintaining an effective environmental planning and management process but also achieving meaningful institutionalisation. This involves inter-institutional and cross-sectional procedures and behaviour, built into a daily planning and management (UNCHS, 1995). Although, virtually all the stakeholders (LGA) agreed to have incorporated their information and capacity buildings into the planning processes, the survey of the users revealed otherwise. Meanwhile, the members of the public were in a better position to judge the outcome of any project (see table 4.15).

To ensure accountability required by all stakeholders, the question on how the LGAs ensured accountability in the health sector by efficient planning and management was very important. This survey revealed that checklist and checkmating was used in Ose LGA, while in Akure North, their own accountability approach was a proper planning for every 'kobo' expended. However, in Ilaje, the question of accountability seemed fabulous. Certainly, where there was no proper accountability, corruption was unavoidable. This might undermine local government credibility and,

hence, deepen urban poverty (UNCHS, 2000). With this condition of lack of accountability, effective health service delivery would be, negatively, affected, reducing accessibility to health care facilities in the rural areas of the study (see table 4.15). In respect of accountability and transparency criteria, the tabular presentation indicates a high level of health care services deficiency.

According to the respondents (particularly the health policy makers at the local government level), the facilities' locations were done by building on the land provided by the community themselves. The size and the capacity of the health care facilities were determined by the population number in Ose LGA, while the facility was predetermined by the number of beds and services rendered in Akure North LGA. Ilaje LGA considered patients' health needs as basic requirements for determining the size of facilities. Because there were variations across the LGAs with respect to what were considered before citing a facility, the ultimate goal and health outcome would expectedly vary too. Even though these requirements were necessary, no one was mutually exclusive. The process of facility location would necessarily depend on the needs of the people. The other determining factor was the population to be served; and subsequently the number of beds and services to be rendered (WHO, 1978). Among the areas surveyed, only Ilaje seemed to follow this order in determining facility location and size. Others could be said to have put the cart before the horse. By implication, it meant there would be inequity both in the distribution of health facilities and provision of health services, thereby predetermining the overall health outcome

Table 4.15: Planning Strategies on Healthcare delivery

Kind of planning and management strategy.			*Communities participation in the discussion of their problems and priorities*	*The incooporation of the village into actions plan through ward, the districts and national priorities*	*Wether the plans center on the priority needs of the people*	*How do you make your plan*			*Do you incorporate information and capacity building into the planning process*	*How do you ensure accountability*
	Participatory	Top down	Both				Decision centrally made	Rely on data contracted out	Uniform assumption of the people		
Ose		1		1	1	1				1	Check list and checkmate
Akure		1		1	1	1				1	Plan for every kobo spent
Ilaje		1			1	1				1	

Source: Author's fieldwork, 2010

4.16.0 The physical planning of health facilities

This sub-section discusses the outcome of health facilities planning in the study area of Ondo State and issues that bothered on the planning standard and regulations as it affected the surveyed health facilities. A detailed analysis of characteristics of the physical aspect of the health facilities (such as land area for facilities, allocation in terms of structure, road and open space) as required planning standards is also to be provided under this discussion. Variables that will be considered are: approximation of area by health facility; description of facility; space required for the facility; planning and research management; emergency capacity of the facility; and the population a facility could serve at a time, based on the number of beds in the facility.

4.16.1. Land area for health facilities in the study area

According to Lahda (2003), space allocation referred to the distribution of space among a number of objects with different sizes so as to ensure the optimal space utilisation and the satisfaction of additional requirements and/or constraints. The location and provision of health facilities are done based on the type, size of the population and area required, in other words. Planning and efficient management of health care space becomes relevant if one regards space as a vital resource which allows health care facilities to fulfil their functions in terms of health care delivery. The allocation management of land rests on ministry of works, lands and housing, in Nigeria. Investigation revealed that there was within the ministry, land-use and allocation committee, for the purpose of allocating lands to members of the public who wanted to acquire them. Unfortunately, the land policy was non-operational in Ondo State. Although land services was controlled by the ministry of works, headed by the commissioner for works, the ministry was mainly to manage government lands and estates, acquire land for government use and to allocate lands to prospective users.

Table 4.16.1 presents the data on the minimum and desirable site areas for health care facilities. The land areas were always measured in hectares, and whether or not, they complied or deviated. Given in the table, an average health facility should have underdeveloped portion to ascertain it provided room for future expansion. Out of the sampled thirteen facilities, nine were found to have less than the

minimum standard. Only the Basic Health Center, Imeri had a land area of 0.5 hectare to 1 hectare; other facilities occupied residential plots of 20m x 36m which did not comply with standard requirements. Although, three facilities, namely General Hospital, Iju; General Hospital, Igbokoda, and Adeyemi Clinic occupied over 1 hectare each, when its type of facility were considered as occupying a minimum of 20 hectares, it could be said that not a single one of the facilities met the required standard. The reason for deviation from the standard could be lack of competent and professional health facilities' planners and managers. Where the facilities' planners and managers were available, the costs of their professional services were believed to be very high. Furthermore, the land tenure system could also contribute, because land tenure discouraged the people from acquiring land for development. This was especially so when private services providers were in dire needs of such available lands. Aribigbola (2008) stated that urban planning had a little or no influence over the process of land management, and as such, there was no special allocation in hectares to guide the establishment of health care facilities.

In the same vein, Sanni (2010) in his study of distribution patterns of health care facilities in Osun State asserted that, often times, in planning for health care services at all levels of government in Nigeria, sectoral approaches were adopted, without giving much regards to spatial dimension of the health facilities provided. Also, Lahda (2003) submitted that the class of space allocation or capacity allocation problems was that in which the amount of space (area volume) or capacity that was available had to be distributed among a set of items, satisfying specific requirements and constraints.

Table 4.16.1 : Minimum and desirable site areas for health care facilities

Facilities	*Location*	*Site Area in hectare*		*Actual*	*Non-compliance*
		Minimum	**Desirable**		
Basic health centre	Iju, Imeri, Oberawoye	2.4	4	0.09,0.69,0.01	√
Comprehensive health Centre and Cottage	Okeluse,/ Igbokoda,	6	10	0.01 and 0.43	√
General Hospital	Iju, Igbokoda	20	24	1.5 and 2.17	√
Health Post	Iju,	2.4	4	0.05	√
Maternity	Okeluse	2	2.8	0.23	√
Clinic	Ife Olu Medical Clinic, Iju; Adelabu clinic, Okeluse; Ebenezer Medical Clinic, Igbokoda	2	2.8	0.18,0.02 and 0.01	√
Private Hospital	Adeyemi Hospital, Iju; Ayemafuge, Igbokoda	As in General Hospital	As in General Hospital	1.2 and 0.02	√

Source: Author's field work, 2010

Note, √ represents Non Compliance, standards adapted from Vagale 1971and standard adapted from WHO, 1985

4.16.2.1 Allocation of land (structure, road, open space)

Land allocation involves assessing all requests for space, using the health facilities guideline, determining the space requirement needs and its users, and creating space solutions for the needs of the health facilities. This is always done in unit area. The principal tool for the evolvement of area size standards are density standards (where density refers to an amount of some factor divided by the area that the factor occupies). Therefore, planning standards for the allocation of lands for various health services and structures in any area is established to ensure that there is an adequate land for the various categories of health facilities and to provide space for expansion where and when necessary. Under this heading in the study, each category of health care facilities and structural standard (floor area covered) required for it in the sampled area was taken into consideration. Both the layout plan and the design were not available, nonetheless. However, the measurement of the area size (site covered) for the health facility structure to ascertain the dimensions of both the area occupied and services area were taken by the researcher (see the appendices).

4.16.2.2 Basic health center

With respect to the needs of any health care facilities, a series of criteria can be established for this functional grouping with the aim of providing for the most important interconnection of departments and functions, concerns, anticipated flows of persons and goods in-between and through various sections of the hospital. Basic health centre as one of the type of health care facilities was located at Iju, Oberawoye and Imeri as shown in the table 4.16.2. The space standard required for different service areas include pharmacy department, treatment room, health education, family planning, outpatient department (OPD) and immunization with a dimension of 1.5 hectare (HKPITA, 2011). Out of the metre square allocated, 38m^2 were to be allocated to open walkway.

In all the sampled facilities, there was a deviation from the standard dimension of 100m^2 while open walkway were not available in the facilities. This was due to the lack of standard planning guide which could be given by planners. When the standard was compromised, it affected the functionality of, not only the department or facilities, but also the entire health care system. When such happened, the health conditions of the patients were endangered, consequently driving them to choose to go through referrals or make alternative choices for health care service.

The standard number of consulting rooms for the category of facilities was three (3), but the existing facilities had just two each. The deviation from the standard could be traced to a reason earlier given. The implication was that the fewer the number of consulting rooms was, the fewer the number of human resources (doctors and nurses) needed as the case might be. As a result, both the consultants would come once in a while and facilities might be overstretched, thereby affecting those seeking medical care.

The standard floor that was required for basic health center was a concrete one. Concrete floor is resistant to acid, alkali and salts, and it could be easily cleaned and disinfected. Besides, concrete floor helps in reducing the amount of radiation received (WHO, 1985). From the sampled facilities, the floors were concretised except at the Maternity Center, Okeluse, which did not have a concrete floor. The facilities whose floors were concretised belonged largely in the riverine areas. Obviously, the reason for choosing the concrete floor was rather technical than being for medical considerations. Among the concrete-floored health facilities were

Ayemafuge Hospital, Ebenezer Medical Clinic, Basic Health Center and General Hospital, Igbokada. At the other facilities, the floors were not made of concrete because those areas were dry lands and were not prone to water logging.

United Nations (1977) in its submission further explained that, mainly in developing countries, standards often tended to be too high, and these imposed unrealistic claims upon existing resources. Where it was relatively humid, it might be practically difficult to expect a concrete wall, because of the stuffy nature of the facilities and combined with the high cost of beams and the attendant health implications. Moreover, United Nations (1979) articulated that the problem frequently arose when standards were indiscriminately based on information in foreign publications. Besides, transfer of imported standards without choice and the necessary adaptation could easily lead to squandering of limited resources instead of encouraging the desired service delivery efficiency.

4.16.2.3 Comprehensive health center/cottage hospital

The comprehensive health and cottage hospital share the same facility type. Basically, the comprehensive health and cottage hospital have the same catchment area and functional statuses. From the sampled areas of Ondo State, both the comprehensive health and cottage hospital were found in Okeluse and Igbokoda. The areas of their specific services and their hectares are calibrated in Table 4.16.2. Their services covered general medicine department which had two consulting rooms and a radiography room, maternal and child health section, pharmacy, general services and circulation. The facility required a standard of 3.6 hectare (HKPITA, 2011). Considering all the facilities that fell into this category, the department covered an area of below the standard in Okeluse, having a dimension of 80m^2. However, when compared with Igbokoda Comprehensive Health Center, it could be said to be better. This was because Okeluse was relatively a new health facility project where standard and modernity was factored into the building. From the two facilities, they did not satisfy the required standard and had no radiography at all.

Maternal and child health required standard of 110-145m^2 (WHO, 1985) out of the entire hectare allocated. From the facilities, the standard was compromised. The same applied to pharmacy and general service as the dimension of area allocated to them were 90m^2, 35m^2, and 65m^2t, respectively. The deviation can be connected to

quack contractors on the one part, who lacked requisite knowledge of the building profession, and were also bent at making a huge profit from the existing building project. On the other hand, lack of supervision during the process of the project to the last phase by planner or allied professional to ensure that there was a strict adherence to the planning brief. The expected number of consulting rooms for this category of health care was six. As mentioned earlier, the fewer the number of consulting rooms was, the fewer the human resources and the demand. The two facilities in this capacity deviated from the standard. Comprehensive health centers had three consulting rooms while cottage hospitals had four. This would make both facilities and available human resources to be overstretched; since one departmental consulting room would differ considerably in terms of functions.

4.16.2.4 General hospital

The General hospital was the largest health care facility considered in this study. Specific areas located among the facilities surveyed are Iju, and Igbokoda. The General hospital served as a referral center to the remaining lower-order facilities. The size and land allocated to the general hospital facility would be much more, given the number of services it had to render. Among the services rendered are: general medicine department, which is expected to be .6 hectare by standard, including two consulting rooms and radiography (HKPITA, 2011). The existing facilities show non-compliance to this planning standard. For instance, General Hospital, Igbokoda had services area of 110m^2 in dimension, although it did not have a room for radiography, while the General Hospital, Iju, had services area of the dimension of 100m^2, including radiography room.

Maternal and child health require a standard services area space of 110-145$m,^2$ according to WHO (1985). In particular, the two facilities in the area of this study, namely General Hospitals, Igbokoda and Iju had 100m^2 and 105m^2, respectively. Their services area included pharmacy, general services and circulation. Other services covered in the health facilities ophthalmology and dentistry, radiography and laboratory (which include extra space for additional consulting room, general service, and possibly a rural maternity unit and/or tuberculosis clinic) with the required standard services areas as 1000m^2, 61-81m^2, 53-76m^2, 19-24m^2, respectively (WHO, 1985). The data showed that while the unit area (i.e. tuberculosis clinic) expected to

be found in the facilities did not exist there at all, there was no place allocated to the tuberculosis clinic. Similarly, others that existed only to some degree adhere to the standard. The reason might not be unconnected with a possible inadequate supervision, given the facility during its construction stage by the government. Besides, Igbokoda was relatively new in terms of health facility construction, compared with Iju General Hospital.

4.16.2.5 Health post

Health post is the smallest health facility which ensured individual accessibility to health care delivery. Health post belongs to type 1 facility. The standard area space required for the health post services was 50-60 m^2, as indicated in Table 4.16.2 (WHO, 1985). By standard, the general services area and the building should be square in shape and be compacted. This enables the place to be protected for easy cross ventilation. The only health post among the sampled health facilities was located in Iju. The result in Table 4.16.2 shows a deviation from the standard area, as what obtained for the Iju health post was 30m^2 to serve as general health services area. Similarly, the standard numbers of consulting rooms were 3 to 4, but there was only one consulting room in the facility. The deviation could be attributed to the small land area; less than a medium size plot was allocated to the facility, thereby reducing facility's space to the barest size.

4.16.2.6 Maternity

Maternity provides for model working units which can be combined in different ways for each department in the maternity center and for the center as a whole, indicating possible layouts and exploring floor and contact needed between departments. The standard area required for the general services/consulting room and circulation was between 1.5 hectare, excluding polyclinic (general hospital) (HKPITA, 2011). The only facility that fell within this category in the sampled facilities was the Maternity in Okeluse which deviated from the expected standard, having a consulting room. The land space allocated the Okeluse Maternity was 60m^2. The reason was the fact that the facility had existed for more than 70 years and had served as a dispensary. Only recently, the facility was upgraded to maternity status but without a recourse to space expansion. Its wall materials were red bricks made of

local clay by the help of the community. Similarly, its concrete wall and floor were not made to adhere to the WHO's standard (see table 4.16.2).

4.16.2.7 Clinics

Clinics in the study area shared the same status as the maternity center, except that the sampled clinics were mainly privately owned. They included Ife-Olu Medical Clinic, Iju; Adelabu Clinic, Okeluse; and Ebenezer Medical Clinic, Igbokoda. The services area included general services and circulation. If a clinic was not attached to the general hospital, the required standard services area space was 1.5 hectare (HKPITA, 2011). Not a single private clinic adhered to the required standard services area space, as some of them were privately owned. Besides that, private health facilities were operated most importantly for profit, another reason for adherence failure could be the high cost of building the standard clinic. It was almost not surprising that most of the clinics were operated in rented apartments inside residential buildings. Some of these shared the buildings with their occupant owners and others rented the entire buildings.

4.16.2.8 Private Hospitals

With respect to private hospital, hospitals which were mainly found in Iju and Igbokoda, namely Adeyemi Hospital and Ayemafuge Hospital, respectively, were expected to share the same status with a general hospital and have the same unit services areas. Unfortunately, the reverse was the case as the hospitals were not more than mere dispensaries having less than 2 consulting rooms, and occupying residential buildings.

In general, it could be concluded that all the sampled facilities did not adhere to the required planning standards. Most of the reasons were not unconnected with some of the issues earlier discussed under each category of health care facilities (see table 4.16.2).

Table 4.16.2.0 Spatial Standards for Land allocation in the activities areas of health care facilities

Facility Type	*Location*	*Service area required*	*Land or floor area requirement*	*Actual*	*Density of development & intensity of floor usage*	*Comment*
Basic Health Center	Iju,Imeri and Oberawoye	*Outpatient department (OPD) *Family Planning unit. *Pharmacy, *treatment, *health education *immunizationsto *store *circulation	1.5 hectare Out of which 38m^2 are open walk way	100m^2 without open walkway	Iju 64 % ,Imeri 4.1%,Oberawoye 54%	C
Comprehensive health Centre and Cottage hospital	Okeluse/ Igbokoda	*General Medicine including (2 consulting rooms and radiography) *Maternal and Child Health *Pharmacy *General Service *Circulation	3.6 hectare	230 m^2	Okeluse 5.1%,Igbokoda 5.1%	C
General Hospital	Iju, Igbokoda	*General Medicine including (2 consulting rooms and radiography) *Maternal and Child Health *Pharmacy *General Service *Circulation *Specialized Medicine (Ear, Nose, Throat) *Optamology and Dentistry *Radiography *Laboratory Extra Space for additional consulting room, general services and possibly a rural maternity unit and a tuberculosis clinic	9.4 hectare	346m^2 and 334m^2 respectively.	Iju 64%, Igbokoda 5.1 %	C

Source: Adapted from the World Health Organization Guide on Planning and Design of Health Care Facilities in the Rural Areas, 1983 and HKPITA(2001) Planning Standards and Guide **Note**: C = Comply NC = Not Comply

CONT…

Spatial Standards for Land allocation in the activities areas of health care facilities

Facility Type	*Location*	*Service Area requirement*	*Standard Land or floor area requirement*	*Actual*	*Density of development & intensity of floor usage*	*Comment*
Health Post Maternity	Iju Okeluse	Sq Building The general services + consulting rooms + circulation if not attached to Private clinic (general Hospital)	50 -60m^2 1.5 hectare	1 60m^2	Iju 65.9%, Okeluse 11.6 %,	C NC
Clinic	Ife Olu Medical Clinic, Iju; Adelabu clinic, Okeluse; Ebenezer Medical Clinic, Igbokoda	Some general services + circulation if not attached to a general Hospital	1.5 hectare	-	Ife oluwa 26.8 %, Adelabu, 45.7 %,Ebenezar 45.4 %,	C
Private Hospital	Adeyemi Hospital, Iju; Ayemafuge , Igbokoda	As in General Hospital	As in general Hospital	-	Adeyemi Hospital, Iju 28.6 % Ayemafuge 46.7%	C

Sources: Adapted from the World Health Organization Guide on Planning and Design of Health Care Facilities in the Rural Areas, 1983. and HKPITA 2011) Planning Standards and Guide **Note**: C = Comply NC = Not Comply

Meanwhile, apart from the services area as well as the access area, which are supposed to be covered by standard hectare, the remaining are to be open space, and may be used for future services area expansion, hence, leaving room for flexibility. According to WHO (1985), health care facilities, however small, were complex structures having relatively long lifespans, particularly the buildings. It is, therefore, inevitable that, during the lifetime of a health care facility, the various service functions within it may need to be re-organised to address changing circumstances, to adopt different treatment techniques, and to allow for technical improvements and financial opportunities. Furthermore, health care facilities should not and should never be regarded as a complete definitive entity, for not only could financial opportunities alter, but the emphasis on treatment areas may receive radical modification (WHO, 1985).

4.16.3 Road Standard for Health Care Facilities

As Ayeni (1979) asserted, accessibility was one of the most frequently used terms and yet, just a little space on definition is giving to it in urban and regional studies. Meanwhile, Akinola (1997) viewed it in the light of rural accessibility which referred to physical access to employment, services and facilities in rural area. Therefore, road plays a major determinant in the accessibility of rural health care. Health care facilities are of different types and have different standards to which they are to adhere in order to deliver their individual functions. Health care facilities of various categories are not expected to be located on expressways, ring roads, primary arterial road, or secondary arterial road. What is required and expected are distributor, access roads and cul-de-sac with standards of 3.7, 3.4-3.7 and 3.1-3.4 widths and sidewalks of 2.5-3.7, 1.8-3.0 and 1.5-1.8 meters, respectively (Ministry of Land and Housing, 1975; HMSO, 1974; Chiara et al., 1978). According to Uloko and Agbonoga (2005), health facilities (more especially, health centers) should be distributed within the neighbourhood to allow for other community services such as schools, shopping and community centers. In addition, distributor roads generated low traffic, thereby avoiding the prolonged traffic hold-up that might aggravate health problems, especially in cases of emergency.

From the surveyed facilities in the three sampled LGAs, Basic Health Center, Imeri, General Hospital, Iju, and Basic Health Center, Iju, did not comply with the required standard as they were served with secondary arterial roads of 4 meters in width, although because the areas were rural there was a relatively low traffic. Notwithstanding, because communities were bound to grow, the road could generate more traffic, over time, and ultimately change the order of facilities to which they belong. On the roads, the right-of-ways were not observed at all. Meanwhile, other facilities like General Hospital, Igbokoda, complied with the planning standards as it was served with cul-de-sac type of road with 3.3 meters width but no sidewalk. Others yet, such as Cottage Hospital, Okeluse, Comprehensive Health Center, Igbokoda, and Basic Health Center, Oberawoye, had no graded roads. So, it was difficult to determine the width of the health facilities' roads. Indeed, some of the private facilities were either converted residential buildings or shared apartments in residential buildings; naturally, the facilities compromised design standards for their health care facilities types (see table 4.16.3). In addition, as they were sited among the

rural residential buildings, no single private hospital had a graded road, thus, the measurement could not be determined.

Besides, the absence of planning standards and the few health planners that usually occasioned the deviation from infrastructural requirements, weak or lack of policy guidelines that could compel the private practitioners to adhere to the standard was another important factor. Yet, land tenure was another major cause of the non-adherence. The overall effect of this was that people who stayed far away from the facilities might have their health negatively affected because the users could not travel at times of emergency. Calharinus et al. (2002) noted that roads created barriers and additional disturbance that, in turn, caused fragmentation of the landscape and its population. They added that the type of impact that road infrastructure could have on the environment depended on the specific characteristics of the road (width, type of pavement, and mitigating measure); specific characteristics of the traffic (speed, flow, and composition by mode); and of the verge (the shape and surface overgrowth).

Table 4.16.3 Road standard type in the study area

Facilities	*Location*	*Standard required*	*Actual in metre*	*Type of road expected*	*Actual*	*Right of way Or walkway*	*comment*
General Hospital	Iju	3.7	4	Distributor	Secondary arterial road	*	√
Basic Health centre	Imeri	3.7	4	Access or cul-de-sac	Secondary arterial road	*	√
Basic Health centre	Iju	3.7	4	Access		*	
General Hospital	Igbokoda	3.7	3.3	Distributor or Cul-de-sac	Cul-de-sac	*	√
Cottage Hospital	Okeluse	-	-	-	-	*	Not graded
Maternity	Okeluse	-	-	-	-	*	Not graded
Comperehensive Health Centre	Igbokoda	-	-	-	-	*	Not graded
Basic Health Centre	Oberawoye	-	-	-	-	*	Not graded
Adelabu clinic	Okeluse	3.7	4	Access	Secondary arterial road	*	√
Ife Olu Medical clinic	Iju	-	-	-	-	*	Not graded
Ayemafuge	Igbokoda	-	-	-	-	*	Not graded
Adeyemi Clinic	Iju	-	-	-	-	*	Not graded
Ebenezer medical clinic	Igbokoda	-	-	-	-	*	Not graded
Health Post	Iju	-	-	-	-	*	Not graded

Author's field work, 2010

Note, * represents not existing while √ represents Non Compliance

Note, standards adapted from obateru,2006, Uloko and Agbonoga (2005).

4.16.4 Open Space for health facilities

Open space referred to a large land area which is divisible in functions as between playing fields and parks, although both functions may often be appropriately provided within a single site. The location of open space is very germane to the planning of health care facilities. Open space provides a place of somewhere pleasant to stroll and sit, and perhaps for small children to play (Kebble, 1969). The health-related aspect of it has to do with physiotherapeutic measure which it provides for people with autopedic cases. His neighbourhood applicability idea in existing towns is bound to be limited, but the reverse is the case in the new town which characterised the rural area under study. The standard land area required for an open space is determined after the services area or land area required for health facility structure has been taken from the standard area needed for each category of health care facilities, mainly between 40 to 50 percent of the land allocated (Obateru,2004).

Out of the entire fourteen facilities sampled in the study area, not a single one of them had an open space, however small it may be. In this area of health care facilities, the open space was not considered because the health value might not be appreciated by the facility planners. The factors of limited land area available for facility location and cost of siting an open space might equally have contributed. The data result is shown in Table 4.16.5.

Table 4.16.4. Open space standard to be served by different category of health facilities in the study area

Facilities	*Location*	*PopulationStandard required to be served*	*Open space standard*	*Open space existing*	*comment*
Basic health centre	Iju, Imeri,Oberawoye	30, 000 – 50, 000	0.9	*	√
Comprehensive health Centre and Cottage Hospital	Okeluse,/ Igbokoda,	100,000 – 150,000	2.4	*	√
General Hospital	Iju, Igbokoda	500,000 – 1,000,000	10.6	*	√
Health Post	Iju,	4,000	Not determined	*	√
Maternity	Okeluse	15,000 – 20,000	0.9	*	√
Clinic	Ife Olu Medical Clinic, Iju; Adelabu clinic, Okeluse; Ebenezer Medical Clinic, Igbokoda	15,000 – 20,000	0.9	*	√
Private Hospital	Adeyemi Hospital, Iju; Ayemafuge, Igbokoda	As in General Hospital	As in general hospital	*	√

Author's field work, 2010
Note, * represents not existing while √ represents Non Compliance
Note, standards adapted from vagale 1971, kebble 1969.

4.16.5 Bed Space Standard for Health Care Facilities

The standard bed space required for different categories of health care facilities in the sampled settlements were reflected in table 4.33. In this regard, the categories of health facilities in the study area were determined based on the standard ratio given by WHO facility planning and design for rural areas. Each of the facility ratio was divided by the existing population to arrive at the estimated number of beds required for each facility in the study area. From the findings, it was obvious that virtually all the facilities did not meet the required number of beds, as against the expected thresholds for the facilities. The deviation was not unconnected with poor funding of the health facilities, which characterised the entire health sector, particularly in Ondo State.

According to Andrew (1977), 2.0 percent of beds for the population of 10,000 were required in an ideal health facility (a general hospital, in particular). This meant that twenty thousand beds were required. Similarly, WHO recommended 8 beds for in-patient area m^2 per bed. Going by this standard, the entire facilities in the study area fell below standard. Nonetheless, Ondo State facility accreditation requirement stipulated 20 bedsheets for a health center, meaning that twenty beds were required. Again, all the facilities fell below the required standard based on the empirical

findings. The implication was that people might have to seek medical services from other facilities either within or outside their settlements, especially at the peak period. This corroborated the result of general inadequacy in the facilities, as revealed by the study in this section.

Table 4.16.5: Bed space required

Facilities	*No of the facilities*	*Standard ratio of hospital bed for population*	*Bed Space Existing*	*Bed Space required*
Basic health centre	3	22: 1	14	3084
Comprehensive health Centre and Cottage	2	200: 1	24	4,800
General Hospital	2	600: 1	8	4,800
Health Post	1	17: 1	4	17
Maternity	1	20: 1	4	20
Clinic	4	20: 1	8	80
Private Hospital	1	As in general hospital	24	600

Source: Author's field work, 2010; Note- standard adapted from WHO, 1985

4.16.6 Location of Health Care Facilities

Location of facilities in urban planning refers to the siting of facilities in an area with the ultimate aim of ensuring thorough physical form and structure of urban settlements and create a functionally efficient physical environment for living, working, circulation and recreation. Health institutions location vary considerably, in their functions and sizes. The standard area required of any type of health facilities is a level land topography such as primary health institutions, dispensaries, clinics, maternity homes and health centers. Meanwhile, large hospitals like general hospitals and other higher-order health facilities might be sited on gentle slope of up to 6 degrees (Obateru, 2006). According to Obateru (2006), the rationale was to obviate high construction cost and environmental degradation. In addition, WHO (1977) submitted that a slope of more than 1: 10 would ,invariably, cause design problem for circulation and would make application of single-storey debatable; even poor soil and ground conditions might inhibit flexibility by restricting the opportunity for different directions of expansion due to extra foundation cost. Data on the slope gradient that could be used to determine the suitability of each of the facilities could not be gotten.

Therefore, readings on global positioning system (GPS) were used as surrogate to indicate the heights of the facilities with respect to their individual location attributes.

From the facilities sampled, only Basic Health Center, Imeri, contravened this standard, as a lower-order facility. Although the slope was not determined, with field observation the facility located on a high relief relative to the land area of 259.08 metre and situated on latitude 7.306598 and longitude 5.922424 could be seen. Relief was an important accessibility factor. Where the relief was high, it took much effort to reach the facilities, thereby affecting the utilisation of the facilities. From the table, it is clear that certain facilities were located on relatively flat ground, meaning that less effort would be needed to reach the facilities. All other facilities complied with this standard in terms of location and consideration of low level land. To be sure, from table 4.16.5 the degree of height show some areas were higher than Imeri, but only relatively.

Meanwhile, the reason for the deviation from the standard in Imeri could be traceable to the 'U' valley land shape, rugged and steep slopes that were characteristic of the settlement. Besides, the high cost of grading steep slopes as well as servicing the facility and the utilities on them might pose a threat to health care delivery. Similarly, an area liable to flooding or water logging was not required for health care facility location, because of its inconveniences, costly construction and unhealthiness. According to Kebbel (1969), it would be difficult to determine the degree of flooding or water logging, which constituted a serious disadvantage to development; and where this was done it would be difficult to define the area affected.

Four out of the facilities sampled, namely Ayematuge Hospital, Ebenezer Medical Clinic, Basic Health Center, Oberawoye, Comprehensive Health Center, Igbokoda, and General Hospital, Igbokoda, mainly from the riverine area, could not meet this standard requirement. Plate shows the health facilities submerged into a waterlogged area overgrown with grasses. This was because the whole area was waterlogged. Since it was inevitable to build health facilities, it meant more cost would be allocated for sand fillings and much concrete was required for building a health facility.

Table 4:16.6: The locational atttributes of health care facilities in the study area

No	*Facilities and location*	*Meters*	*Latitude*	*Longitude*
1	Basic Health Centre,Imeri	259.08	7.306598	5.922424
2	Cottage Hospital, Okeluse	67.056	6.779354	5.581548
3	Maternity,Okeluse	56.6928	6.780160	5.590589
4	Adelabu hospital	359.9688	7.397167	5.255449
5	Health Post Adeyemi, Clinic	364.8456	7.395809	5.286872
6	Basic Health Centre, iju	381.3048	7.390201	5.260523
7	Ife Olu medical Clinic,iju	362.4072	7.383625	5.261992
8	General Hospital, Iju	375.2088	7.381767	5.257480
9	Health post, iju	375.5136	7.395179	5.262792
10	Comprehensive Health Centre, Igbokoda	4.572	6.355288	4.803869
11	Ayemafuge hospital, Igbokoda	5.4864	6.356658	4.803256
12	General hospital ,Igbokoda	8.8392	6.365655	4.791225
13	Ebenezer medical clinic,Igbokoda	6.092	6.352513	4.807623
14	Basic health centre,Oberawoye	6.4008	6.138854	4.789241

Source: Authors' field work,2010

4.16.7 Availability of infrastructural facilities

The data on availability of infrastructural facilities in the study area of Ondo State were described in Table 4.16.6. To describe the availability of infrastructural facilities, a number of questions were asked. The questions included: the description of the building used for operation; sources of power supply; the regularity of power; and sources of commonly used water. The results on the buildings used for the operational services of health facilities revealed that only six buildings (42.86 percent) were specifically designed for their health facility purposes. The other health facilities' structures were either converted from residential buildings or were sharing apartments in residential buildings with the tenants (see plate 4.1). Those that were primarily designed for health facility purposes included Cottage Hospital, Okeluse; Comprehensive Health Center, Igbokoda; General Hospital, Igbokoda; Health Post, Iju; Ayemafuge Hospital, Oberawoye; and Basic Health Center, Oberawoye.

Deducible from this was that the health facilities had a peculiar planning and design standard, as shown earlier in this section, but not all health facilities had incorporated the planning and design standard. Again, this might affect the functionalities of the facilities. For instance, the parking lot, mortuary and radiology departments might be, definitely, affected in an adverse manner.

Only few of these health facilities had any provisions for these stated adjoining facilities. The unavailability of these extra health facilities would, furthermore, tell on patronage by patients. In consequence, a lot of the patients would have to go to higher-order facilities for medical services in treating their ailments, farther away from their immediate domains. This further negated the validation and verification of technical issues that border on whether the right health system was constructed and whether or not the system was consistent in its output.

In theory, according to KSPA (2004), quality health services could be provided in the most minimal service delivery setting. However, clients and members of staff were more likely to enjoy or be satisfied with a health facility if the basic comfort amenities and infrastructure components were available. These comfort facilities included a functioning latrine, regular supply of water, and electricity. Accordingly, the provision of the comfort amenities would motivate the staff to also provide higher-quality services. Table 4.16.7 shows the data on availability of infrastructural facilities in health facilities in the study area of Ondo State. From the table, four (28.57 percent) of the sampled health care facilities depended on PHCN power supply. The health facilities included Basic Health centre , Imeri; Maternity, Okeluse; Basic Health Center, Oberawoye; and Adeyemi Clinic, Iju. About eight (57.14 percent) of the facilities combined the PHCN source with power generating sets. Two (14.3 percent) health care facilities, such as cottage hospital and health post, were observed to have no power supply at all. The implication was that those who depended only on PHCN for electricity would have clients changing their patronage to other facilities: there might not be overnight admission for cases of serious illnesses. Incidentally, the three health facilities that depended solely on PHCN were owned by the state. Adeyemi Clinic belonging to private individual might lose on profit, however. It was also discovered that the regularity of electricity supply was affected by the so-called ‘Nigerian factor,’ whereby electricity supply was epileptic.

It can also be observed from the table that only Basic Health Center, Imeri, accounting for 7.14 percent, agreed that electricity was regular. Possibly, the power phase to which the hospital was connected was the special source, that is, one preserved from frequent power outages. Probably, only influences of the politicians could explain this phenomenon.

The importance of water in health systems has been recognised. WHO (1998) remarked that good water and sanitation had the potential to reduce illness drastically and that 80 percent of ill health in less developed countries stemmed from the lack of safe water and from inadequate sanitary conditions. Table 4.16.7 shows the data on the sources of water commonly used by the health facilities in the study area. The water source available options were pipe-borne water; borehole; river/lake or pond; wells; and water from unknown sources. None of the facilities enjoyed pipe-borne water. Four (28.57 percent) facilities used boreholes. These were General Hospital, Igbokoda; Ebenezer Medical Clinic, Igbokoda; Basic Health Center, Oberawoye; and Ayemafuge Hospital, Igbokoda. Maternity Center, Okeluse, got her water from an unknown source. The use of water from river, pond or lake was indicated for two health facilities, accounting for 14.3 percent of the respondents. Close to half of the facilities, six (42.86 percent) used well water too. Since there was no regular power supply, as shown from the result from the study in Ondo State, pumping water from boreholes might pose difficulty to the health service providers. Moreover, water from stream sources might contribute more to ill-health; more so that most water from the rural areas lacked modern hygienic treatment (see plate 5.5).

The data on the distance and regularity of water supply in the study area is also presented in Table 4.16.7. From the table, about three (21.43 percent) facilities had their water outlets at about 200m distance; three at about over 500m distance; and more than half of the facilities had their outlets located within their sites. However, about twelve (85.7 percent) facilities had regular water supply. Only Basic Health Center, Imeri, and Adeyemi Clinic, Iju, indicated no regular supply of water. By implication, in respect of distance, when nearby sources of water were dried up community members had to travel long distances, spending hours to fetch water. This might have serious implication for their health, which was also a result of poor planning.

Plate 4.1: A Residential house converted to health facilities in Akure North of the study area
Source: Authors' fieldwork, 2010

Table 4.16.7: Availability of infrastructural facilities on health facilities in the study area (A)

Facility	*Building used for operation*				*Source of power supply*				*Power regularity*		*Source of commonly used water*				
	Design for the purpose	Converted	Part of residential building	Others	PHCN	Generator	PHCN and Generator	No power supply	Just regular	Not Regular	Pipe borne water	Borehole	Water from unknown streams	River lake or pond	Well water
Basic Health Center, Imeri	0	1	0	0	1		0	0	1	0	0	0	1	0	0
Basic Health Center, Iju	0	0	1	0	0	0	1	0	0	1	0	0	0	1	0
Adelabu Clinic Iju	0	1	0	0	0	0	1	0	0	1	0	0	0	1	0
Maternity, Okeluse	0	0	0	1	1	0	0	0	0	1	0	0	1	0	0
Cottage Hospital, Okeluse	1	0	0	0		0	0	1	0	1	0	0	0	0	1
General Hospital, Iju	0	0	0	1	0	0	1	0	0	1	0	0	0	0	1
Comprehensive health center	1	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Igbokoda General Hospital	1	0	0	0	0	0	1	0	0	1	0	1	0	0	0
Ebenezer medical clinic, Igbokoda	0	1	0	0	0	0	1	0	0	1	0	1	0	0	0
Health Post, Iju	1	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Ayemafuge, Igbokoda	1	0	0	0	0	0	1	0	0	1	0	1	0	0	0
Ife Olu medical clinic Iju	0	1	0	0	0	00	1	0	0	1	0	0	0	0	1
Adeyemi Hospital, Iju	0	0	1	0	1		0	0	0	1	0	0	0	0	1
BasicHealthcentre,Oberawoye	1	0	0	0	1	0	0	0	0	1	0	1	0	0	0
Total	6	4	2	2	4	0	8	2	1	13	0	4	2	2	6

Source: Author's fieldwork, 2010

Table 4.16.8 shows additional data on the availability of infrastructural facilities in the health facilities. The additional data are on issues of distance of water outlet; nature of water supply; hazardous waste disposal system; facility clinic/unit; and disposal of needles and sharp objects system. All these variables are, by standard, supposed to be incorporated in any health care facilities planning and design. With respect to disposal of used objects, it is very crucial in effective health care delivery. The ways in which the service providers dispose their hazardous wastes are, thus, presented in the table 4.36. The hazardous wastes included items that might be contaminated by blood, or other biological wastes, and might be infectious if touched, as noted in KSPA (2004).

From the result, only three (14 percent) out of fourteen sampled health facilities in the study area disposed their wastes by burning them in incinerators. These three facilities were lower-order health institutions. They were Basic Health Centers, Imeri, Oberawoye and Iju. Five (35.71 percent) facilities burned and buried their wastes, while three (21 percent) burned and removed the wastes to offsite dumps. Only Comprehensive Health Center did not bury its hazardous wastes after burning them. The implication was that if the wastes were visible, and not protected from animals or people, either before or after being removed or burned, there was an increase in the chance that people or animals might eventually come in contact with them, hence risking resultant infection. KSPA (2004) noted in this regard that the most effective means of disposal was the incinerator and subsequent burial of the remains. Only the two (14.3 percent) basic health centers met this stated requirement.

In respect of the way a facility clinic disposes her sharp objects like syringes and needles, the same applied to earlier result discussed on the disposal of hazardous wastes, although there were variations in the disposal system; eight (57.14 percent) health facilities burned and buried their sharp objects and needles, while two (14.3 percent) burned and threw theirs into dumpsites. Amazingly, only Comprehensive Health Center, Igbokoda, accounting for 7.14 percent of the facilities, did not burn and bury her sharp objects, syringes and needles, in spite of the kind of professionals that were expected to staff the facility. Similarly, three (21.43 percent) out of the sampled health care facilities did not burn and throw into dumpsites. The three facilities (21.43 percent) included Basic Health Center, Iju; Basic Health Center, Oberawoye; and Cottage Hospital, Okeluse (see plate 5.3). As earlier discussed, not

burning and throwing into dumpsites the hazardous wastes did pose danger to the staff and patients, as well as the animals around.

Plate 4.2: Refusedump in the open site at Iju-Itaogbolu Genral Hospital (Akure north LGAs)
Source: Authors'feildwork, 2010

Table 4.16.8: Availability of Infrastructural facilities on the Health facilities in the Study Area (B) continued

Facility		*Nature of water supply*			*Hazardous waste disposal system*				*Facility clinic/unit disposal of needle and sharp object system*						
		200 m	Above 500m	Within site	Regular	Seasonal	Burned in incinerator	Burned and buried	Burned and remove to offsite dump	Burned and not buried	Thrown into the trash or open pit or dump	Burned & buried	Burned & removed to offsite dump	Burned & not buried	Thrown into the trash/open pit or dump
Basic Health Center, Imeri		0	0	1	0	1	1	0	0	0	1	1	0	0	0
Basic Health Center, Iju		0	1	0	1	0	1	0	0	0	1	0	0	0	1
Adelabu Clinic		0	0	1	1	0	0	0	0	0	0	0	1	0	0
Maternity, Okeluse		0	0	1	1	0	0	1	0	0	0	1	0	0	0
Cottage Hospital, Okeluse		0	1	0	1	0	0	0	0	0	0	0	1	0	1
General Hospital, Iju		0	0	1	1	0	0	1	0	0	0	0	0	1	0
Comprehensive health center		0	0	1	1	0	0	0	0	1	0	1	0	0	0
Igbokoda General Hospital		0	1		1		0	0	1	0	0	0	1	0	0
Ebenezer medical clinic, Igbokoda		0	0	1	1	0	0	1	0	0	0	1	0	0	0
Health Post, Iju		1	0	0	1	0	0	1	0	0	0	1	0	0	0
Ayemafuge, Igbokoda		1	0	0	1	0	0	0	1	0	0	1	0	0	0
Ife Olu medical clinic Iju		1	0	0	1	0	0	0	1	0	0	1	0	0	0
Adeyemi Hospital, Iju		0	0	1	0	1	0	1		0	0	1	0	0	0
Basic Health Center, Oberamoye		0	0	1	1	0	1	0	0	0	0	0	0	0	1
Total	Exist	21.43%	21.43 %	57.14 %	85.7%	21.43%	14.3%	35.71 %	21.43%	7.43%	14.3%	57.14%	14.3%	7.43%	21.43%
	Does not exist	78.57%	78.57 %	42.86 %	14.3%	78.57%	85.7%	64.29 %	78.57%	92.57 %	85.7%	42.86%	85.7%	92.57 %	78.57%

Source: Author's field work 2010

In furtherance of the discussion on availability of infrastructural facilities in the sampled health care facilities, Table 4.16.9 presents more obtained data. Variables covered in the table are: availability of functional telephone; program for routine maintenance and repair of infrastructures; program for preventive maintenance of major equipments; the commonest means of transport; functional ambulance; and transport arrangements for emergency patients. To begin with, telephone is one of the components of infrastructure that brings comfort to both the client and the staff. According to USAID (2004), a phone or software radio to make calls outside must be available at all times clients were offered services. The phone facility must also be within 5 minutes distance from the facility staff in times of emergency. In all the sample facilities, only Ife-Olu Medical Clinic, Iju, accounting for 7.14 percent of the facilities, had a functional telephone. All other sampled facilities (92.86 percent) did not have a functional phone. This was, particularly, the case in the public-owned health facilities, unfortunately. The implication was that the clients might find it difficult reaching the nearest phone facility, should an emergency occur. The rurality of the study area might make the service providers not bother to provide such exigency. Phone facility provision could also be money-consuming; and factoring the bill into the clients billing might make the clients feel the charges were too high and opt for alternative facilities (see Table 4.16.9).

According to Muga et al. (2004), to provide quality service, a facility must have the means to ensure that facility equipment and infrastructure were maintained in functioning conditions. Some machinery should routinely receive preventive maintenance. From Table 4.16.9, it is obvious that two (14.3 percent) of the sampled facilities had an outside support, while one had both inside and outside supports. Outside staff was only found in Adeyemi Clinic. The remaining one facility had no routine maintenance at all. The implication was that when such infrastructure was repaired the repair might not be done perfectly well, since the repairer would want to be patronised again. Also, it was more costly to engage people from outside – external service provider. Those who did not have the outside staff stood the risk of not getting patients which might affect the overall health care delivery when the equipment got damaged.

As regard major routine maintenance of major equipments in the health care facility, according to KSPA (2004), the facilities used different methods for

maintaining and replacing small equipments. Among these methods were on-site repair, sending the equipments outside for repair, or replacement. From table 4.37, only two (14.3 percent) facilities had such routine maintenance provisions. They were General Hospital, Igbokoda, and Ife-Olu Medical Clinic, Iju. The other facilities did not have any of such maintenance provision at all.

The table equally displays the most common means of transport used to reach the health facilities in the study area. According to the facilities' operators, the majority of the people visited the facilities in their private vehicles. Nine (64.29 percent) facilities agreed to this option. One (7.14 percent) facility also used ambulance for the transportation of the sick; this was General Hospital, Iju. Other means of transportation not mentioned by the providers were recognised in the four (35.7 percent) other facilities, and these included waterway transport. Basic Health Center, Oberawoye, in particular, agreed on patients that used the waterway transport. The implication of this was that being a rural area where vehicles hardly plied, if there were no ambulance, in time of emergency, it might pose health threat to the client. Moreover, this might have a long time effect on the facility manager since people would prefer to patronise highly equipped facilities.

Furthermore, the table shows data on availability or use of a functional ambulance by the sampled health facilities. According to the facilities' operators, about nine (64.29 percent) facilities, out of the sampled 14, indicated the use of functional ambulances in their health facilities. As earlier mentioned, only one was being used among the available ambulances. The reason for increase in the number of ambulances with shortfall in its usage might indicate lack of drivers or high charges for ambulance which the patients might be unable to afford, especially for private hospitals or clinic. As shown in table 4.16.9, five (35.71 percent) out of the nine health facilities, having functional ambulances, belong to the government. The remaining four (28.57 percent) facilities were private clinics. Health Post, Iju, accounting for 7.14 percent of the facilities, seemed to contradict the statutory ownership of ambulance because of the lower service-order they rendered. During the survey, it was discovered that they had ambulance which was in the General Hospital through which they refer patients to the facility.

The table further shows the means by which arrangement was made to get to health facilities. Only General Hospitals, Iju, (7.14 percent) found it so magnanimous

to go out of their way to bring patients to the facility during emergency. Eleven (78.57 percent) of the facilities surveyed revealed that relatives of the patients were always responsible for conveyance of the patients to the facilities. Only two (14.3 percent) facilities (Basic Health, Iju and Ife-Olu Medical Clinic (Iju) were involved in the use of both the relatives and the staff of the hospital.

Generally, infrastructures' availability form a critical aspect of the systems to support health, provision of quality services in health facilities, and access to general health care systems in Ondo State. Although it is feasible to offer health services under a variety of conditions, there are certain infrastructures and health system components that are believed to be necessary for a consistent level of quality and appropriate utilisation of health services which effective planning will ensure. Going by all the adjoining infrastructures in the studied facilities, it could be said that the facilities had not been available, hence deficient in meeting planning and standard requirements. Those infrastructures considered were water, telephone, electricity supply, and facility for treating hazardous waste. The standard had earlier been mentioned in the cause of each of those items treated in this regard.

Table 4.16.9: Availability of infrastructural facilities of the health facilities in the study area (c) continued

Facilities	*Availability of functional telephone*		*Programme for routine and repair and maintenance of infrastructure*				*Programme for preventive maintenance for major equipment*		*The commonest means of transport*			*Functional ambulance*	*Transport arrangements for emergency of patients*		
	Exist	Not exist	Onsite staff	Outside support	Both inside and outside staff	No routine maintenance	Does it exist		Private vehicle	Ambulance	Others		Facility staff	Relatives	Both facility staff and relatives
							Exist	Not exist							
Basic Health Center, Imeri	0	1	0	0	0	1	0	1	0	0	1	0	0	1	0
Basic Health Center, Iju	0	1	0	0	0	1	0	1	1	0	0	0	0	0	1
Adelabu Clinic	0	1	0	0	0	1	0	1	1	0	0	1	0	1	0
Maternity, Okeluse	0	1	0	0	0	1	0	1	0	0	1	1	0	1	0
Cottage Hospital, Okeluse	0	1	0	0	0	1	0	1	1	0	0	1	0	1	0
General Hospital, Iju	0	1	0	0	0	1	0	0	0	1	0	0	1	0	0
Comprehensive health center	0	1	0	1	0	0	0	1	1	0	0	1	0	1	0
Igbokoda General Hospital	0	1	0	1	0	0	1		1	0	0	1	0	1	0
Ebenezer medical clinic, Igbokoda	0	1	0	0	1	0		1	1	0	0	1	0	1	0
Health Post, Iju	0	1	0	0	0	1	1	1	1	0	0	1	0	1	0
Ayemafuge, Igbokoda	0	1	0	0	0	1	1	1	1	0	0	1	0	1	0
Ife Olu medical clinic Iju	1	0	1	0	0	0	1		1	0	0	0	0	0	1
Adeyemi Hospital, Iju		1	0	0	0	1	0	1	0	0	1	1	0	1	0
Basic health centre, Oberamoye	0	1	0	0	0	1	0	1	0	0	1	0	0	1	0
Total Yes	7.14 %	92.86 %	7.14%	14.3%	7.14%	71.43%	28.57 %	85.7 %	64.29%	7.14%	28.57 %	64.29%	7.14%	78.57%	14.3%
No	92.86%	7.14 %	92.86 %	85.7%	92.86%	28.57%	71.43 %	14.3 %	35.7%	92.86%	71.43 %	35.71%	92.86%	21.43%	85.7%

Source: Author's fieldwork, 2010

4.16.8 Facility Planning for Facilities' Operations

The frequency of operation of any health facility might, to some extent, be determined by planning of such facilities which eventually will affect their utilisations. The frequency of operation in this study was measured by time, such as morning, night, 24 hours or village meeting days. From the data in Table 4.16.8, it was revealed that 11 (78.57 percent) facilities operated for 24 hours; two (14.3 percent), Cottage Hospital and Health Post, Iju, operated in the morning, health post were not required to operate all round the clock. Other options did not apply to any of the facilities. Specifically, the 24 hours facility operation was not uninteresting; the 24 hours service could save lives threatened by serious illnesses or complications. According to Muga et al. (2004), not all types of facilities were expected to provide 24 hours emergency services. KSPA (2004) corroborated that a facility was said to have a basic 24 hours emergency services if it offered emergency on-site treatments with the capacity to monitor, seriously, ill patients overnight until it was possible to refer the patient for an in-patient treatment where necessary.

Table 4.16.8 presents data on medical operations in the sampled facilities. Apart from Cottage Hospital, Health Post and Ayemafuge Hospital, accounting for 21.4 percent of the sampled facilities, all the other facilities ran both outpatient and in-patient facility services, supporting the result earlier discussed. Nevertheless, Health Post was not required by standard to operate overnight health care services. The table equally shows that apart from Health Post, Iju, other facilities had beds for overnight watching. The number of bed spaces for overnight watching was less than 20 in each of the facilities, with the exception of Health Post, Iju. In particular, General Hospital, Igbokoda, had up to 20 beds for overnight watching. The implication was if there was an emergency case in the night, the chances of access to medical facilities might be constrained, thus, posing serious threat to the patient's health.

Table 4.16.8 further shows whether the health care facilities had routine services for mobile clinics. Ten (71.43 percent) facilities indicated they had. It was interesting to note that among the ten facilities, two (14.3 percent) were private facilities and these were Ayemafuge Hospital and Adeyemi Clinic. The two private hospitals had outreach health programmes. Four (28.57 percent) facilities did not have the mobile clinics at all. This implied that people in the interior might not be able to

access the facilities when due so as to receive medical care because of distance, finance, and absence of the mobile outreach health programmes.

In Table 4.16.8, moreover, the 14 (100 percent) sampled health care facilities rendered a number of services. The services included antenatal care, laboratory diagnoses, among others. Besides, physiotherapy and general consultation indicated as outreach services, others were indicated as they applied to the individual facilities in the study.

In general, under this sub-section, it could be concluded that the generally perceived operational variables in the studied facilities did not meet the required standards. The findings showed a remarkable weakness in the area of planning of the sampled health care facilities in the study area. The poor planning of the facilities could be partly due to cost minimization and lack of adherence to the planning standard by facilities' planners. Another possible factor was poor funding. Furthermore, when a health facility provided a full range of services, entailing both curative and preventive treatments as seen in the hospitals, health centers and maternities, its operational efficiency was of approved standard. On the other hand, where a facility failed to offer the required range of services, it operated below the required standard, according to findings in this study. And regarding technical support, the findings showed that planning of the facilities had been, simply, inadequate.

Plate 4.3: River Ugbo used both for drinking and toileting in Ilaje LGA

Note: The data were derived from the authors' field work in 2010.

Table 4.16.8: Medical operations in the studied facilities available (a)

Facilities	*Frequency of Operation*		*Mode of operation*		*Bed for evening observation*		*If bed exist, how many?*					*Facility has routine*	
	Morning	24hrs	Outpatient facility only	Both outpatient & inpatient facility	exist	Does Not Exist	Less than 20	20	30	60	Above 80	Outreach Yes	Mobile clinic No
Basic Health Center, Imeri	0	1	0	1	1	0	1	0	0	0	0	1	0
Basic Health Center, Iju	0	1	0	1	1	0	1	0	0	0	0	1	0
Adelabu Clinic	0	1	0	1	1	0	1	0	0	0	0	0	1
Maternity, Okeluse	0	1	0	1	1	0	1	0	0	0	0	1	0
Cottage Hospital, Okeluse	1	0	1	1	0	0	1	0	0	0	0	1	0
General Hospital, Iju	0	1	0	1	1	0	1	0	0	0	0	1	0
Comprehensive health center	0	1	0	1	1	0	1	0	0	0	0	1	0
Igbokoda General Hospital	0	1	0	1	1	0	0	1	0	0	0	1	0
Ebenezer medical clinic, Igbokoda	0	1	0	1	1	0	1	0	0	0	0	0	1
Health Post, Iju	1	1	1	0	0	1	0	0	0	0	0	0	1
Ayemafuge, Igbokoda	0	0	1	0	1	0	1	0	0	0	0	1	0
Ife Olu medical clinic Iju	0	1	0	1	1	0	1	0	0	0	0	0	1
Adeyemi Hospital, Iju	0	1	0	1	1	0	1	0	0	0	0	1	0
Basic health centre, Oberawoye	0	1	0	1	1	0	1	0	0	0	0	1	0
Total Available	14.3%	85.7%	21.43%	85.7%	85.7%	7.14%	85.7%	7.14%	0	0%	0%	71.43%	28.57%
Not available	85.7%	14.3%	78.57%	14.3%	14.3%	92.86%	14.3%	92.86%	100%	100%	100%	28.57%	71.43%

Source: Author's fieldwork, 2010

4.17 Characteristics of technical support services in health care facilities

Health care facilities require a network of technical services for both preventive and curative health treatments. Only some facilities are expected to offer a full range of basic services and these include outpatient services for sick children, antenatal care, among others (KSPA, 2004). This section presents the characteristics of technical support services in the sampled health care facilities in Ondo State. The technical support services included laboratory tests and diagnoses; radiology; physiotherapy, paediatrics, theatre operation services, pharmacy, ambulance services, mortuary, gynaecology, family planning services, immunization services, and general consultation. Table 4.17 shows the data on the technical support services employed by the facilities in the study area.

In Table 4.17, three (21.43 percent) facilities, namely General Hospital, Iju; Comprehensive Health , Igbokoda; and General Hospital, Igbokoda; all of which belonged to tertiary health care facilities, were found to have Diagnosis laboratories. The other facilities had none. The availability was connected to the order which the supportive facilities belonged. To begin with, radiology is an electro-medical service involved in accessing the internal human frame known as skeleton. Radiology is very significant; it is valuable in taking *x*-rays. In all the sampled facilities, not one, out of the entire 14 facilities, had a radiology department. It was even an unfortunate realisation about the higher-order facilities like the general hospital, the comprehensive health center and the cottage hospital. These three higher-order health facilities were required by medical standard to have a radiology department; only the Health Post was exempted. Thus, WHO (1977) rightly observed in its estimation that less than one third of the world population had access to diagnostic radiology, but such figure was misleading because the majority of x-ray units were concentrated in the larger cities; and owing to poor maintenance in many countries, even where there were x ray facilities in the rural areas, up to 30 percent might be out of use at any time. Meanwhile, in the majority of developing countries, most of the population have lived in rural areas and about the half rural hospitals in Nigeria do not have X-ray units.

Physiotherapy department is necessary because of road and domestic accidents, for the effective service delivery at any health care facility. Table 4.17 also contains data on the availability of physiotherapy department at the surveyed health

facilities in this study. The table reveals, as with radiology, that none of the health facilities had physiotherapy department, in spite of the fact that the rural dwellers were exposed to accident of various kinds.

Moreover, paediatric department deals with cases that pertain to child care. With regards to the table, only one (7.14 percent) facility, General Hospital, Iju, had a provision for the paediatric health service; the others did not have. However, this was no very surprising discovery: such care was offered at the higher-order facilities, and there was the predominance of the lower-order facilities in the rural areas.

With respect to theatre operations, none of the 14 health facilities had a theatre facility. No doubt, it would affect the overall health care delivery at the facilities, considering the importance of theatre facility. WHO (1977) accounted in this regard that modern surgery was complex; it was an expensive affair; and there was a widening gap between wealthy countries and the developing world in terms of their expectations of, and their provisions for, surgery. As touching dental services, dental services contributed to the overall health care delivery in a significant way. Dental services have been found to be mostly unavailable, despite growing cases of dental problems prevalent in the rural area. Only two out of the entire sampled facilities did offer dental services. They included Comprehensive Health Center, Igbokoda, and General Hospital, Igbokoda. The reason for not providing the service could be that people in the rural area were hardly exposed to can foods and sugary foods that could deteriorate their dental sets. Also, most traditional herbs, present in the area, could act as surrogate for modern medicine in cases of dental treatment, thereby discouraging the utilisation of modern health facilities. With a poor demand, little attention would invariably be given to the provision of the dental services too, as evident in the surveyed facilities.

The pharmacy department renders services in the area of dispensing drugs prescribed by the doctors to the patients. The pharmacy department works hand in hand with the doctors to be sure that the prescribed dosages are given to patients. Only three facilities (21.43 percent), out of the 14 sampled, offered the pharmacy service. The other facilities did not have pharmacy departments. In the case of ambulance service, General Hospital, Iju One (7.14 percent) offered the service, while the other facilities did not. Nevertheless, Mortuary facilities were present in different facilities in the study area.

Considering all these adjoining facilities, it was only in the health post facilities that were not expected to offer them. The others should provide all the adjoining health services. The reason for the absence of the adjoining services could be traced to shortage of medical professionals, specialists in those particular areas. Another possible reason was the high cost of locating the ancillary services, particularly in the private hospitals where profit maximisation came first and the threshold populations to generate the desired profit were not provided.

Nevertheless, in the area of gynaecology, it is important that pregnant women receive a periodic assessment to monitor the progress of their pregnancies and identify risk factors. Only five (35.71 percent) facilities, among the sampled facilities, offered the service. They included General Hospital, Iju; Comprehensive Health Center, Igbokoda; General Hospital, Igbokoda; and Basic Health Center, Oberawoye. The rest facilities did not offer gynaecology departments. Though , by standard, the health post was not expected to operate gynaecology services.

Family planning service deals with the use of various modern contraceptive. Family planning service has been integrated into the maternal and child health services of the Ministry of Health in Nigeria. In Ondo State, the ministry of health has promoted the family planning service. According to KSPA (2004), family planning service is integrated to clinics at dispensaries, health centers, district and provincial hospitals. From the facilities surveyed, six facilities (42.86 percent) indicated that they provided family planning services. The other facilities did not. The higher number of the facilities that did have family planning service units showed a clear neglect in their planning. Furthermore, compared with the alarming rate of population growth in the country, the facilities' attitude was a demonstration of lack of disregard for birth control.

Relating to the family planning service issue was immunization programme, another important service unit that should be integrated in the existing categories of health care facilities. Six facilities (42.86 percent) indicated the availability of the immunization units in their service departments. As regarding general consultation, this was completely lacking among the various facilities surveyed. Certainly, the facilities would face problems in health care delivery, for the lack of general consultation service. This absence might, nonetheless, be accounted for by the shortage of professional nurses required for the health care business.

In general, all the technical services required by the facilities were not available owing to a shortage of medical personnel, a high cost of establishing the supportive units, stemming out of weak planning of the health facilities. Also, the facilities like health posts, maternity centers and clinics were not expected to have radiology department, ambulance services, physiotherapy department, and the likes. These mentioned services belonged to the higher-order health care facilities.

Table 4.17: Characteristic of technical support services in the Facilities (b)

Facility/ location		*Services are offered by the diffrent department or unit*													
		Laboratory testing and diagnosis	Radiography	Physiotherapy	Pediatrics	Theatre operation service	Dental service	Pharmacy	Ambulance service	Mortuary facilities	Gynecology	Family planning services	Immunization services	General consultation	Others
Basic Health Center, Imeri		0	0	0	0	0	0	0	0	0	0	1	1	0	0
Basic Health Center, Iju		0	0	0	0	0	0	0	0	0	0	1	1	0	0
Adelabu Clinic		0	0	0	0	0	0	0	0	0	0	0	0	0	1
Maternity, Okeluse		0	0	0	0	0	0	0	0	0	0	0	1	0	0
Cottage Hospital, Okeluse		0	0	0	0	0	0	0	0	0	0	0	1	0	0
General Hospital, Iju		1	1	0	1	0	0	1	1	1	1	0	0	0	0
Comprehensive health center		1	0	0	0	0	1	1	0	1	1	1	0	0	0
Igbokoda General Hospital		1	0	0	0	0	1	1	0	1	1	1	0	0	0
Ebenezer medical clinic, Igbokoda		0	0	0	0	0	0	0	0	0	0	0	0	0	1
Health Post, Iju		0	0	0	0	0	0	0	0	0	1	0	1	0	0
Ayemafuge, Igbokoda		0	0	0	0	0	0	0	0	0	0	0	0	0	1
Ife Olu medical clinic Iju		0	0	0	0	0	0	0	0	0	0	1	0	0	0
Adeyemi Hospital, Iju		0	0	0	0	0	0	0	0	0	0	0	0	0	1
Basic health centre Oberawoye		0	0	0	0	0	0	0	0	0	1	1	1	0	0
Total	Available	21.43%	7.14%	0	7.14%	0	14.3%	21.43%	7.14%	21.43%	35.71%	42.86%	42.86%	0	28.57%
	Not available	78.57%	92.86%	100%	92.86%	100%	85.7%	78.57%	92.86%	78.57%	64.29%	57.14%	57.14%	100%	71.43%

Source: Author's field work, 2010

Table 4.18 shows the different wards available within each of the surveyed health care facilities in the study area. The more the number of beds available in a facility was, the better the facility could admit in times of emergencies, and vice versa. Male and female wards were available in virtually all (100 percent) the facilities, except Maternity, Okeluse, Health Post, Iju, and Adeyemi Hospital. Among these sampled health facilities, only Adelabu Clinic, Iju, General Hospital, Iju, General Hospital, Igbokoda, and Ebenezer Medical Clinic, Igbokoda (28.57 percent of the facilities) had children wards. In respect of surgical room, only Adelabu Clinic (7.14 percent) had a separate room for this, while in Basic Health , Iju, and Imeri, and Adelabu Clinic and General Hospital, Igbokoda (28.57 percent) had antenatal care unit operational. It was only Comprehensive Health , Igbokoda, that had intensive care unit.

By implication, where children and male adults were lumped together certain contagious diseases could easily be spread. A good instance was measles, which was a common infection among children. In addition, there would also be a low level of privacy among the patients and this might have psychological effects on them, worsening their cases of illnesses.

Table 4.18: Different wards available in the facility

Facilities		*Children*	*Female*	*Male*	*Surgical*	*Antenatal*	*Intensive care unit*	*Others*
Basic Health Center, Imeri		0	1	1	0	1	0	1
Basic Health Center, Iju		0	1	1	0	1	0	1
Adelabu Clinic		1	1	1	1	1	0	0
Maternity, Okeluse		0	0	0	0	0	0	1
Cottage Hospital, Okeluse		0	1	1	0	0	0	0
General Hospital, Iju		1	1	1	0	0	0	0
Comprehensive health center		0	0	0	0	0	1	0
Igbokoda General Hospital		1	1	1	0	1	0	0
Ebenezer medical clinic, Igbokoda		1	1	1	0	0	0	0
Health Post, Iju		0	0	0	0	0	0	1
Ayemafuge, Igbokoda		0	1	1	0	0	0	1
Ife Olu medical clinic Iju		0	1	1	0	0	0	0
Adeyemi Hospital, Iju		0	0	0	0	0	0	1
Basic health centre Oberawoye		0	1	1	0	1	0	0
Total	Available	28.57%	71.43%	71.43%	7.14%	35.71%	7.14%	42.86%
	Not Available	71.43%	28.57%	28.57%	92.86%	64.29%	92.86%	57.14

Source: Author's field work, 2010

4.18.1 Available beds and staff on payroll in facilities

The data on the number of beds available across the health facilities is presented in Table 4.18.1. From the table, the majority of the sampled health care facilities had an average of three and four beds in male wards, with eight beds (7.14 percent) being the highest number from General Hospital, Iju. The same thing applied to both the female and children wards in General Hospital, Iju, being 10 (7.14 percent). In all, there were about 72 beds in the facilities sampled, meaning the populations were more than the available number of beds the facilities could serve. By implication, the population per hospital bed was much more, especially when compared with the estimated 1,632 people per hospital bed on the national average. It

could then be deduced that the bed facilities could be over-stressed. Olujimi (2003) corroborated on his study of Owo region of Ondo State on the extremely high patronage of bed facilities in the health care institutions.

Different facilities have different staffing pattern, viz those on their payroll. This study also investigated the number of staff that were present in every facility with respect to the ones on payroll. The result in table 4.41 shows the distribution of staff according to the individual facilities. For instance, Adelabu Clinic, Iju, had only one (7.14 percent) staff on its payroll; General Hospital and Health Post each had three staff members (21.4 percent); but Basic Health, Imeri, had 24 (7.14 percent) staff members. This was surprising because the general hospital needed to be more staffed than the basic health center, due to the different levels of services they offered. In respect of medical doctors, seven facilities had just one doctor each; Comprehensive Health had two; and General Hospital, Igbokoda, had three. This facility doctor ratio was very low, and it had implication for quality health care facility utilisation, for all the sampled facilities. This is a subject fully discussed in the previous chapter.

Generally, professional nurses appeared to be scarce; few facilities had them. Two (14.3 percent) professional nurses were found in government-owned facilities, while three (21.4 percent) were also found in private hospitals. In spite of the paucity of personnel, Ayemafuge Hospital, alone, (7.14 percent) however, had about 16 general nurses and Comprehensive Health Centre, Iju, had four. The distribution on the availability of nurses at the sampled health facilities is contained in table 4.41. In terms of professional midwives, the staff members appeared few. Out of four facilities having midwives – two private (Ebenezer Medical Clinic, Igbokoda, and Ife-Olu Medical Clinic, Iju) and two public (Health Post, Imeri, and Comprehensive Health , Iju) – only one (7.14 percent) of them had one midwife, while the others (92.6 percent) had two. When compared with the national average, the data shows a considerable shortage of midwifes at the sampled facilities. Akindele (1990) made similar findings in his study carried out in Ifesowapo, Ondo State.

In general, it could be said that concerning the issues that bordered on the wards and the medical staff, which were very critical to the overall delivery of health care to the population, the findings revealed a lot of deviation from the required standards, as also pointed out in this study.

Table 4.18.1: Different numbers of beds in the existing wards and the staff on payroll

Facilities	*Males*						*Female*						*Children*				*Staff on payroll*				*Doctors*				*Professional (general) Nurse*				*Professional midwives*	
	2	3	4	5	6	8	2	3	4	5	8	10	1	2	4	10	1	3	4	24	1	2	3	4	1	3	4	16	1	2
Basic Health Center, Imeri	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	1
Basic Health Center, Iju	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adelabu Clinic	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Maternity, Okeluse	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cottage Hospital, Okeluse	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
General Hospital, Iju	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Comprehensive health center	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1
Igbokoda General Hospital	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Ebenezer medical clinic, Igbokoda	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1
Health Post, Iju	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
Ayemafuge, Igbokoda	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
Ife Olu medical clinic Iju	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0
Adeyemi Hospital, Iju	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		1	0	0	0	1	0	0	0	0	0
Basic health centre Oberawoye	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
Total Available (%)	14.3	14.3	35..7	28.6	14.3	7.14	28.6	7.1	14.3	7.1	7.1	7.1	7.1	7.1	7.1	7.1	21.4	7.1	7.1	7.1	57.1	7.1	7.1	7.1	7.1	14.3	7.1	7.1	7.1	21.4
Not available (%)	85.7	85.7	64.3	71.43	85.7	92.9%	71.4	92.9	85.7	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9	78.6

Source: Author's field work. 2010

4.19. Characteristics of medical, paramedical personnel and technical staff

Table 4.19.1 presents the data on the number of medical and paramedical personnel in the sampled health care facilities. Variables considered in the study included: community health workers, auxiliary (untrained) nurses, pharmacists, medical laboratory technologists, radiographers, physiotherapists, health record officers, ward aids, laundry workers, gardeners and security officers. In terms of CHEW (community health workers), Table 4.19 shows their availability in the sampled facilities with the highest found in the comprehensive health center. Four facilities each had two CHEW, and Ayemafuge hospital had just one. As for auxiliary nurses (untrained), there were 44 of them found across the facilities. These were mainly found in the private hospitals. The implication of this was that shortage of staff in the rural areas made the health personnels to augment by training the auxiliary nurses. The 44 auxiliary nurses were spread across the private health facilities with the highest distribution (22) in Ebenezer Medical Clinic, and followed by Ayemafuge Hospital, Igbokoda (15), in Ife-Olu Medical Clinic, Iju (5) and Adeyemi Clinic, Iju (2).

There were four pharmacists in all the sampled facilities. Out of the sampled facilities, three (21.4 percent) of them were found to, each, have one pharmacist while one (Comprehensive Health , Igbokoda) had three pharmacists. The total number of medical laboratory technologists was ten in the facilities sampled. General Hospital, Iju, had four; Ayemafuge Hospital and Ife-Olu (14.4) had one each; and Comprehensive Health Center, Igbokoda, had five. The only facility (7.14 percent) having a radiographer was found in Igbokoda General Hospital. Although the study on the availability of health record officers showed that eight were available in all the facilities sampled. From the table, three facilities (21.4 percent) had one record officer each. While one facility (7.14 percent) had two, two (14.4 percent) facilities had five health record officers each. These were Comprehensive Health Care, Igbokoda, and Igbokoda General Hospital, accounting for the highest in the study area.

As regards ward aids, 32 aid workers were recorded in the sampled health care facilities. With reference to the table, the facility, Comprehensive Health , Igbokoda, with 12 ward aids was the highest (7.14 percent) in the distribution. It was followed by seven ward aids in a basic health. The least in the distribution was one, found in Ife-Olu Medical Clinic, Iju, and Adeyemi Medical Clinic, Iju, both of which

accounted for 14.4 percent. In all the facilities there were no cooks at all. With regards to laundry workers, only two (14.4 percent) facilities, each, had one; one (7.14 percent) facility (a cottage hospital) had four and Ayemafuge Hospital (7.14 percent) had five. Gardeners were found to be available among the facilities sampled. One was found in each of the five (35.7 percent) facilities and three were found in one (7.14 percent) facility. Also, one security officer was found in one facility (Cottage Hospital, Okeluse), and in each of the two others (14.4 percent) facilities, while three (21.4 percent) facilities, each, had four security personnel. The distribution of ward aids, laundry workers, gardeners and security officers, again, are contained in table 4.19.1.

Considering the distribution of health personnel and paramedical workers, when compared with the national average, they were inadequate in each of the health facility. In this regard, Ajala et al. (2005) submitted that the consequence of this kind of personnel inadequacy was the exposure of the generality of rural inhabitants to sub-standard health services. Indeed, the rural dwellers had considered the sub-standard health services as the best alternative. The other health care options included the use of herbs and spiritual consultations, among others.

Table 4.19.1: Characteristics of medical and paramedical personnel and technical staff

Facilities		*Community Health workers*			*Auxiliary (untrained Nurses)*				*Pharmacists*		*Medical Lab tech.*			*Radiographers*	*Health record officers*			*Ward aid*					*Laundry*			*Gardeners*			*Security*		
		1	2	18	2	5	15	22	1	3	1	4	5	2	1	2	5	1	2	4	6	7	12	1	4	5	1	2	3	1	2	4
Basic Health Center, Imeri		0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	1
Basic Health Center, Iju		0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	1
Adelabu Clinic		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maternity, Okeluse		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0
Cottage Hospital, Okeluse		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0
General Hospital, Iju		0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0
Comprehensive health center		0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0
Igbokoda General Hospital		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1
Ebenezer medical clinic, Igbokoda		0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Health Post, Iju		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ayemafuge, Igbokoda		1	0	0	0	0	1	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0
Ife Olu medical clinic Iju		0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adeyemi Hospital, Iju		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Basic health centre Oberawoye		0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1
Total	Exist	7.1%	35.7%	7.1%	14.3%	7.1%	7.1%	7.1%	21.4%	7.1%	14.3%	7.1%	7.1%	7.1%	28.6%	7.1%	14.3%	14.3%	14.3%	7.1%	7.1%	7.1%	7.1%	14.3%	7.1%	7.1%	35.7%	35.7%	7.1%	7.1%	14.3%	28.6%
	Not exist	92.9%	64.3%	92.9%	85.7%	92.9%	92.9%	92.9%	78.6%	92.9%	85.7%	92.9%	92.9%	92.9%	71.4%	92.9%	85.7%	85.7%	85.7%	92.9%	92.9%	92.9%	92.9	85.7%	92.9%	92.9%	64.3%	64.3%	92.9%	92.86%	85.7%	71.4%

Source: Author's fieldwork, 2010

4.20: Health management and information system (HMIS) in facilities

Data on the availability of the required Health Management and Information System (HMIS) in the sampled health care facilities are shown in Table 4.20. Health Management and Information System is central to effective planning, monitoring and evaluation of health care services, projects and programmes. The components of HIMS include the health structures, tools and personnel at various levels. WHO (1992) articulated the need for it by insisting that PHC in Nigeria should be assessed to intensify the capacity building at all levels so that they can collect and process data for action. In Table 4.20, only three (21.43 percent) facilities had M and E officers. Two (14.3 percent) had M & E officers, receiving training on health information system. In all the sampled facilities, only Igbokoda General Hospital and Ayemafuge Hospital, Igbokoda, had functional M & E. One of the instruments used for M & E was the calculator, as indicated by three facilities (see Table 4.20).

In terms of the regularity of M & E returns, three (21.43 percent) facilities were found to be regular. M & E units found in the three facilities had submitted their M & E forms. Only one facility (General Hospital, Igbokoda) returned her M & E form, after an interval of almost six months as against the monthly return, according to the required standard. General Hospital, Igbokoda, and Ayemafuge Hospital, Igbokoda (14 3 percent) were the only facilities sampled that made annual compilation of their statistics (see Table 4.20). The only (7.14 percent) facility that used her HMIS for action plan was Ayemafuge Hospital, Igbokoda. The result was not encouraging as it might have a negative implication for a proper planning and management. In addition to the cold attitude perceived in the managements of the sampled health facilities, their entire conduct of HMIS was discouraging.

The implication of the situation was that reliable and up-to-date data would be hard to get when needed. This, invariably, would affect the facility planning, monitoring and implementation, negatively, thereby resulting in poor planning management and poor health delivery. NPHCDA (2001) substantiated that the dearth of reliable data had long been re-organised. The decision, support, flexibility and security of data was lacking, based on the data analysis given above. These were both ethical and professional issues which ensured the security of health record data, cross-check data and provide alerts and ability to quickly make necessary changes within the health facility system. In general, the available surveyed facilities revealed that in

spite of the importance of HIMS in health care delivery, virtually, none of the facilities had it, except General Hospital, Iju, and General Hospital, Igbokoda. Certainly, largely accounting for the poor attitude to HMIS was the shortage of professional staff and deficient planning of the health facilities. In particular, lack of professional health care planners and poor funding of health system were at the root of the HMIS virtual non-existence.

Table 4.20: Health Information System

Facilities		*M&E Officers*	*M&E Officers received training on HIS*	*Functional M&E*	*M&E with calculator*	*Regularity of M&E returns*	*What proportion of M&E submit their M&E*	*How often MIS submit*				*Completed Annual statistics*	*Use*
								Monthly	Quarterly	Never	Half year		
Basic Health Center, Imeri		1	0	0	0	0	1	0	0	0	0	0	0
Basic Health Center, Iju		0	0	0	0	0	0	0	0	0	0	0	0
Adelabu Clinic		0	0	0	0	0	0	0	0	0	0	0	0
Maternity, Okeluse		0	0	0	0	0	0	0	0	0	0	0	0
Cottage Hospital, Okeluse		0	0	0	1	0	0	0	0	0	0	0	0
General Hospital, Iju		0	0	0	0	0	0	0	0	0	1	0	0
Comprehensive health center		0	0	0	0	1	0	0	0	0	0	0	0
Igbokoda General Hospital		1	1	1	1	1	1	0	0	0	0	1	0
Ebenezer medical clinic, Igbokoda		0	0	0	0	0	0	0	0	0	0	0	0
Health Post, Iju		0	0	0	0	0	0	0	0	0	0	0	0
Ayemafuge, Igbokoda		1	1	1	1	1	1	0	0	0	0	1	0
Ife Olu medical clinic Iju		0	0	0	0	0	0	0	0	0	0	0	0
Adeyemi Hospital, Iju		0	0	0	0	0	0	0	0	0	0	0	0
Basic health centre Oberawoye		0	0	0	0	0	0	0	0	0	0	0	0
Total	Available	21.43%	14.3%	14.3%	21.43%	21.43%	21.43%	0.0%	0.0%	0.0%	7.14%	14.3%	7.14%
	Not available	78.57%	85.7%	85.7%	78.57%	78.57%	78.57%	100%	100%	100%	92.86%	78.57%	92.86%

Source: Author's fieldwork, 2010

4.21 Availability and operational frequency of medical personnel

Data on the characteristics of medical personnel is contained in Table 4.21. Variables considered in the table include: availability of resident permanent doctor; the number of doctors; visiting doctors; and the frequency of doctors' visits. Regarding the availability of medical doctors in the sampled health care facilities, the data show that four (64.29 percent) facilities, out of the entire 14 sampled, did not have doctors. And among those facilities that had doctors, the number of each facility's doctors varied. Basically, all these latter facilities had less than 5 doctors. When the ratio of doctor per population was considered, it fell below national average. Apparently, unavailability of doctors was a reason the rural people opted for the alternative herbal medicine and spiritual consultation (Ajala et al., 2005).

On the variable visiting doctors, three (21.43 percent) out of the facilities, that did not have doctors, made up by providing for visiting doctors. The three facilities were Cottage Hospital, Okeluse; Health Post, Iju; and Basic Health, Oberawoye. With respect to the frequency of doctors' visits, the table also shows that doctors only visited on requests, among the available options. This was not a policy in the interest of the patients at all, as it subjected their health care to constant risks. The availability of medical personnel was more in the private health establishments than in the government-owned facilities.

In general, the frequency of visits by visiting doctors in the study area was not encouraging in any way. Most of the facilities sampled, particularly the public, only enjoyed the visitation by requests. The problem of poor distribution of health personnel stemmed from inadequate planning of health care facilities in the rural area. This was a sad reality in the health sector in Nigeria at large. According to Olujimi (2003), without resident doctors, the utilisation of health institutions by consumers could be adversely affected.

Table 4.21: Availability and operational frequency of medical personnel

Facilities	*Availability of resident permanent doctor*	*The number of doctors*					*Visiting doctors if no*	*Frequency of the visit*				
		Less than 5	9-10	11-15	16-20	Over 20 doctor		Daily	Once a week	Twice a week	Four times a week	Only on request
Basic Health Center, Imeri	1	1	0	0	0	0	0	0	0	0	0	0
Basic Health Center, Iju	0	0	0	0	0	0	0	0	0	0	0	0
Adelabu Clinic	1	1	0	0	0	0	0	0	0	0	0	0
Maternity, Okeluse	0	0	0	0	0	0	0	0	0	0	0	0
Cottage Hospital, Okeluse	0	0	0	0	0	0	1	0	0	0	0	1
General Hospital, Iju	1	1	0	0	0	0	0	0	0	0	0	0
Comprehensive health center	1	1	0	0	0	0	0	0	0	0	0	0
Igbokoda General Hospital	1	1	0	0	0	0	0	0	0	0	0	0
Ebenezer medical clinic, Igbokoda	1	1	0	0	0	0	0	0	0	0	0	0
Health Post, Iju	0	0	0	0	0	0	1	0	0	0	0	1
Ayemafuge, Igbokoda	1	1	0	0	0	0	0	0	0	0	0	0
Ife Olu medical clinic Iju	1	1	0	0	0	0	0	0	0	0	0	0
Adeyemi Hospital, Iju	1	1	0	0	0	0	0	0	0	0	0	0
Basic health centre Oberawoye	0	0	0	0	0	0	1	0	0	0	0	1
Total Available	64.29%	64.29%	0.0%	0.0%	0.0%	0.0%	21.43%	0.0%	0.0%	0.0%	0.0%	21.43%
Not Available	35.71%	35.71%	100%	100%	100%	100%	78.57%	100%	100%	100%	100%	78.57%

Source: Author's fieldwork, 2010

4.22 Operational Profile of Health Care Facilities

Table 4.22 presents the data on operational profile of the sampled health care facilities in this study. The variables considered in the table include: modality of facility; treatment success of patients; reason if treatment success was low; and common diseases. The question on operational modalities of facilities was asked from the facility managers. The options among which they were expected to select from were operational modalities that were profit-oriented, humanitarian and where cost of service was subsidised. From the Table 4.22 one (7.14 percent) facility (Ebenezer Medical Clinic, Igbokoda) claimed to run the facility on profit maximisation. Those facilities which were run on humanitarian grounds were three in number. Seven (57.14 percent) of the sampled facilities claimed to subsidise the prices of medicine. The rest did not give any responses. The implication was that they might nurse the fear of being fired by the owners of the facilities.

As regards the treatment success of the patients, three (21.43 percent) facilities indicated they had a success rate with an average of five out of patients out of 10. Two (14.3 percent) facilities had treatment success rate with an average of seven out of patients out of 10. In respect of a success rate of an average of nine out of 10 patients, nine facilities indicated so, thus, accounting for the highest (64.29 percent) among the facilities sampled. Moreover, as mentioned earlier by the users, in chapter four of this work, as indicated by the majority of the health providers the commonest disease among the rural populations was malaria. All the 14 (100 percent) facilities sampled agreed on malaria as the commonest disease. Malaria was only followed by water-borne diseases and cough as indicated by five (35.71 percent) facilities. In addition, three facilities indicated diarrhoea as another common disease at their facilities, being the least common.

As indicated in the previous discussion, the operational modality of the facilities was not encouraging. In general, the result on the sampled facilities' operational pointed at poor planning of the health facilities. Nonetheless, while the commonest disease among the patients in the study area was malaria, the treatment success rate in the facilities revealed that the majority of the patients who could use the facilities did have their health conditions improved.

Table 4.22: Observations of operational profile of health facilities

Facilities		*Operational modality of facility*			*Treatment success of patients*					*Reason if low*				*Common Diseases*				
		Profit oriented	Humanitarian	Cost of service subsidized	Very low: 1 out of 10 patients	Low: 2 out of 10 patients	Average: 5 out of 10 patients	High, 7 out of 10 patients	Very high, 9 out of 10 patients	Critical before coming to hospital	Resistance to disease very low	Inability to complete treatment owing to finance	Transportation problem	1 Malaria	2 Cough	3 Diarrhea	4 Water borne diseases	5 STD
Basic Health Center, Imeri		0	1	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0
Basic Health Center, Iju		0	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
Adelabu Clinic		0	1	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0
Maternity, Okeluse		0	0	1	0	0	1	0	0	0	0	0	0	1	1	0	1	0
Cottage Hospital, Okeluse		0	0	1	0	0	1	1	0	0	0	0	0	1	1	0	0	0
General Hospital, Iju		0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	1	0
Comprehensive health center		0	0	1	0	0	0	0	1	0	0	0	0	1	0	1	0	0
Igbokoda General Hospital		0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0
Ebenezer medical clinic, Igbokoda		1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0
Health Post, Iju		0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
Ayemafuge, Igbokoda		0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0
Ife Olu medical clinic Iju		0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	1	0
Adeyemi Hospital, Iju		0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0
Basic health centre Oberawoye		0	1	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0
Total	Available	7.14%	28.57%	57.14%	0	0	21.43 %	14.3%	64.29 %	0	0	0	0	100%	35.71 %	21.43 %	35.71 %	0
	Not available	92.86 %	71.43%	42.86%	100%	100%	78.57 %	85.7%	35.71 %	100%	100%	100%	100%	0	64.29 %	78.57 %	64.29 %	100

Source: Author's fieldwork, 2010

4.22.1 Attitude of patients to medical treatment

Table 4.22.1 clearly presents the attitude of patients to medical treatment as indicated by operators of the facilities. The treatment success of any patient, to a large extent, depends on him/her as well as the service provider. There were options among which the respondents were to select as many as were applicable to them. In the facilities sampled, four (28.57 percent) out of 10 (71.43 percent) agreed that the attitude of patients had been bad because of inadequate treatment. Three (21.4 percent) facilities indicated medical bills as reasons for slow attitude to medical treatment. Patients were said to be unable to purchase drugs in three of the sampled facilities. Other reasons for negative attitude among the patients to medical treatments included: abandonment of the hospital, and distances to the present location of the facilities. Yet, three facilities, apart from the aforementioned, attributed the negative attitude to unidentifiable or unknown factors. No facility identified reluctance as the reason for patients' negative attitude to medical treatments.

The data on use of referral system at the sampled health care facilities are contained in Table 4.22.1. All the facilities, except Comprehensive Health , Igbokoda, operated a referral system. The reason could be that most clients that utilised them did receive successful treatments. The reason for referring patients to other facilities was attributed to a number of factors. Only Basic Health , Imeri (7.14 percent) complained of lack of drugs as a reason for the referral cases. Two (14.3 percent) facilities, Adelabu Clinic, Iju, and Maternity , Okeluse, indicated cases being beyond the health care capacities of their facilities. Seven other facilities attributed referrals to chronic cases, while one facility referred to inadequate service facilities and manpower. None of the facilities sampled received patients from other facilities. This might be due to the fact that they provided lower-order services through which the patients enter into health care delivery system. The result on use of referral system is contained in table 4.46 based on facilities. Since there had not been an improvement of information among the health care providers in terms of referral system and affordability of the facilities across the household groups, it would naturally affect the attitude of the patients and, subsequently, the utilisation of the health care facilities.

In general, it could be said that the generally perceived attitude of patients to the utilisation of health care facilities was not encouraging. This could be connected to improper planning by the health policy makers, in terms of distribution of health

personnel as well as medical equipments and drugs. The attitude of medical personnel who were not well remunerated coupled with general shortage of medical staff could as well have contributed to the patients' bad attitude.

Table 4.22.1: Attitudes of patients to medical treatment

Facilities		*Description of the attitudes of patients to medical treatment*							*Do you refer to other facility ?*	*Reason for refferer*				*Do you accept patients from other facilities ?*
		Adequate medical treatment 1	Complaints of medical bill high 2	Unable to purchase drug 3	Abandonment of treatment half way 4	Distance of other village and establishment 5	Reluctant to seek medicine 6	Others 7		No enough drug	Beyond the capacity of the operators	Chronic cases	Inadequate facility and manpower	
Basic Health Center, Imeri		1	0	0	0	0	0	1	1	1	0	1	0	0
Basic Health Center, Iju		1	0	0	0	0	0	1	1	0	0	0	0	0
Adelabu Clinic		1	0	0	0	0	0	0	1	0	1	0	0	0
Maternity, Okeluse		1	0	0	0	0	0	0	1	0	1	0	0	0
Cottage Hospital, Okeluse		0	0	0	0	0	0	1	1	0	0	0	0	0
General Hospital, Iju		0	1	1	0	0	0	0	1	0	0	0	1	0
Comprehensive health center		0	0	1	0	0	0	0	0	0	0	1	0	0
Igbokoda General Hospital		1	0	0	0	1	0	0	1	0	0	0	0	0
Ebenezer medical clinic, Igbokoda		1	1	0	1	0	0	0	1	0	0	1	0	0
Health Post, Iju		1	0	0	1	0	0	0	1	0	0	1	0	0
Ayemafuge, Igbokoda		1	0	0	0	0	0	0	1	0	0	0	0	0
Ife Olu medical clinic Iju		1	1	1	0	0	0	0	1	0	0	1	0	0
Adeyemi Hospital, Iju		1	0	0	0	0	0	0	1	0	0	1	0	0
Basic health centre Oberawoye		0	0	0	0	0	0	0	1	0	0	1	0	0
Total	Agreed	71.43%	21.43%	21.43%	14.3%	7.14%	0	21.43 %	92.86 %	7.14%	14.3%	50%	7.14%	0
	Disagree	28.57%	78.57%	78.57%	85.7%	92.86%	100%	78.57 %	7.14%	92.86%	85.7%	50%	92.86%	100%

Source: Author's fieldwork, 2010

4.23 Stages of Actor's Involvement in the Planning of Health Care Facilities

The data on actors and their involvements in planning of the sampled health care facilities are presented in Table 4.23. From the table, it is observed that the planning of the facilities involved both private and public actors. Two (14.3 percent) out of the 14 sampled facilities were owned by the State, Ondo. Only one (7.14 percent) was owned by the community (that is, Community Health Post, Okeluse), although it was said to have been taken over by the local government. Five facilities were owned by private entities and another five owned by the local governments. The result of the distribution is contained in Table 4.23.

The way and manner in which planning of the sampled health facilities were carried out was investigated. From the Table 4.23, the administration of one (7.14 percent) facility, Basic Health Centre Imeri, was run by itself. One (7.14 percent) facility agreed that it was done based on the need of the people. This is found in the community owned facility. It reinforces the fact that communities on their own know what they need, and thereby will respond accordingly during planning of facilities. Two (14.3 percent) facilities agreed that the management and staff did meet quarterly to deliberate on planning of facilities and how they were managed. Incidentally, these two were privately owned. Also, two (14.3 percent) facilities, one private and one publicly owned, agreed that there was the need to plan and produce what was needed in the facility. Others did not get involved or know anything about planning at all.

By implication, few facilities' managers were aware of the planning activities and its implications while others were not involved. According to Wahab (2004), identification of urban environmental issues and involvement of stakeholders in issues of assessment, and priorities setting involved sensitizing and mobilizing the active participation of all the stakeholders, whose interests were affected in one way or another by the environmental issue, or by the different activities of environmental planning and management. This meant that all the stakeholders had not been incorporated into the planning activities of the health care facilities. The facilities managers were asked if they were involved in the planning of facilities or not, to corroborate this fact. The result in table 4.23 shows that a good number of them were involved though; their involvement appeared to be at different stages of planning of health facilities. In addition, in nine of the facilities, the managers agreed on their involvement while at four the managers indicated non-involvement. In general, it

could be said that community involvement in the planning of health care facilities had not been adequate. Major stakeholders or actors in planning had been sidelined in virtually all the planning and management stages requiring their involvements. Ultimately, this would affect the facilities' location within the areas and affect health care delivery outcomes in general.

Table 4.23: Actors involvement in the planning of health facilities from the providers' perspective

Facilities		*Those that were responsible for facility planning*				*How it was done*				*Whether the providers are involved*
		State Govt	Local Govt	Community	Individual	Running of administration	Done as a result of people's need	Management & staff meet quarterly and deliberate issues	Planning and providing what is necessary for the facility	Whether or not they are involved
Basic Health Center, Imeri		0	1	0	0	1	0	0	0	0
Basic Health Center, Iju		0	1	0	0	0	0	0	0	0
Adelabu Clinic		0	0	0	1	0	0	0	0	1
Maternity, Okeluse		0	0	1	0	0	1	0	0	1
Cottage Hospital, Okeluse		0	1	0	0	0	0	0	0	0
General Hospital, Iju		1	0	0	0	0	0	0	0	1
Comprehensive health center		0	1	0	0	0	0	0	0	1
Igbokoda General Hospital		1	0	0	0	0	0	0	0	1
Ebenezer medical clinic, Igbokoda		0	0	0	1	0	0	0	1	1
Health Post, Iju		0	1	0	0	0	0	0	1	0
Ayemafuge, Igbokoda		0	0	0	1	0	0	0	0	1
Ife Olu medical clinic Iju		0	0	0	1	0	0	1	0	1
Adeyemi Hospital, Iju		0	0	0	1	0	0	1	0	1
Basic health centre Oberawoye		1	0	0	0	0	0	0	0	0
Total	Planned	21.43%	35.71%	7.14%	35.71%	7.14%	7.14%	14.3%	14.3%	64.29%
	Not planned	78.57%	64.29%	92.86%	64.29%	92.86%	92.86%	85.7%	85.7%	35.71%

Source: Author's fieldwork, 2010

Table 4.24 captures the stages at which the respondents were involved in the planning of health facilities. The stages are categorised into five: identification of the problems, priority setting, implementation, raising of fund, monitoring, and the extent of the complement of health facility being operated. Apart from Basic Health , Iju, Adelabu Clinic, Iju, and Health Post, Iju, all the other sampled facilities were involved in the identification of problems relating to health facilities. The same applied to priority setting and implementation. However, less than nine (50.0 percent) facilities were involved in the raising of funds and monitoring. Five facilities were found to have followed these two stages, fund raising and monitoring, strictly.

It could be said that planning with the result of the stages involved did not meet the required standard, particularly in the area of monitoring. One of the cardinal principles of environmental planning and management is articulated in health facilities as well. The failure of many projects is as a consequence trying to skip any of the stages. According to Wahab (2006), unless the procedure was retained and routinely practised or applied, the issues that had been successfully tackled might reverse, and this would not benefit anyone at all. The private facilities in the sampled area of this study seemed to complete the process.

The extent to which the facilities being operated had been completed is further presented in table 4.48. From the table, less than half of the entire sampled facilities had been completed. Health Post, Iju (7.14 percent) was abandoned; three (21.43 percent) facilities were still in progress; and four (28.57 percent) were partly completed. This might have serious effect on the health care delivery system in the rural area. Uncompleted facilities might not be able to discharge adequate health care services, let alone the abandoned one. It could be said that the present state of facilities in terms of completeness had not been encouraging.

In the cases of the facilities who indicated they were partly completed, only the general wards had been completed. These facilities included Basic Health Centre, Imeri; Adelabu Clinic, Iju; Maternity , Okeluse; Comprehensive Health , Igbokoda; and Ayemafuge Hospital, Igbokoda. The implication of this was that the health condition of the people would be endangered since the facilities would be operated sub-optimally.

In general, the planning of the health care facilities in all their stages as presented in this subsection had been inadequate. In terms of stages of the facilities

completion as at the time of this study, some were in progress; some were partly completed; and others had been abandoned. In addition, it could be said that there was generally weakness in the facilities' planning, as the people were not carried along in all the stages involved.

Table 4.24: Stages of Actors' involvement in the planning of health facilities from providers' perspective

Facilities		*Identification of the problems*	*Priority setting*	*Implementation*	*Raising fund*	*Monitoring*	*The extent of the complement of health facility being operated*			
							Completely	Abandoned	In progress	Partly complete
Basic Health Center, Imeri		1	1	1	1	0	0	0	0	1
Basic Health Center, Iju		0	0	0	0	0	0	1	0	0
Adelabu Clinic		0	0	0	1	0	1	0	0	0
Maternity, Okeluse		1	1	1	1	1	0	0	0	1
Cottage Hospital, Okeluse		0	0	0	0	0	1	0	0	0
General Hospital, Iju		1	1	1	0	0	0	0	1	0
Comprehensive health center		1	1	1	1	0	0	0	0	1
Igbokoda General Hospital		1	1	1	0	0	0	0	1	0
Ebenezer medical clinic, Igbokoda		1	1	1	0	1	1	0	0	0
Health Post, Iju		0	0	0	0	0	0	0	0	1
Ayemafuge, Igbokoda		1	1	1	1	1	0	0	1	0
Ife Olu medical clinic Iju		1	1	1	1	0	1	0	0	0
Adeyemi Hospital, Iju		1	1	1	1	1	1	0	0	0
Basic health centre Oberawoye		1	0	0	0	0	1	0	0	0
Total	Yes	71.43%	64.29%	64.29%	50%	28.57%	42.86%	7.14%	21.43	28.57%
	No	28.57%	35.71%	35.71%	50%	71.43%	57.14%	92.86%	78.57%	71.43%

Source: Author's fieldwork, 2010

4.24 Facilities' planning problems (providers' perspective)

The data on the problems encountered in the facilities' planning are contained in Table 4.25 . The presented problems include: whether or not the environment was conducive; who was responsible for the choice of location; and how the location was made. Among the problems encountered, finance and logistics ranked very high indicated by seven (57.14 percent) and six (42.86 percent) facilities, respectively. Problems of human capital and others were indicated by one and three facilities, respectively. The distribution across the facilities is given in the table. While logistics problem was predominant in privately owned facilities, finance problem was greater in the public health facilities. This was owing to the fact that disbursements of funds for planning were affected by administrative bottlenecks, in the publicly owned facilities. In contrast, the profit-oriented private hospitals got instant financial attention.

Among the 14 facilities surveyed, eight (57.14 percent) claimed to be comfortable in the environment where they were located; five (35.71 percent) of these were government-owned (either state or local government) since they could use coercion to obtain enough land for their use. This was in accordance with Decree 1979 mandating the people to release their lands to the government, to cater for the general needs and benefits all alike.

As regards those who were responsible for the locations of the land, the locations of five facilities were determined by the government while three of these were determined by the people of the communities. The locations of the remaining facilities were determined by the facility managers. The implication of determining the locations of the facilities by the government was connected with the argument raised by 1979 Land Use Decree, in which the government is required to consult with the people for whom it holds the land in trust. Thus, that these facilities' managers determine the locations should not be surprising; they organize, coordinate and determine what, how and where facilities should be located.

About nine facilities agreed that the majority of the stakeholders supported the locations of the health facilities in their areas. Only one (7.14 percent) private (Ebenezer Medical Clinic, Igbokoda) facility out of five (35.71 percent) never received the support of the people. In its case, the lack of popular support could be due to the unsanitary conditions in the hospital, which might be as a result of un-burnt

medical waste disposals. Land tenure system could also have affected the decision of the people in this respect. But since the land had to be released for common benefit, they might not really have any choice than to stay passive.

In general, from the findings it could be said that more than half of the facilities claimed that the facilities were conducive. The locations of the facilities were either made by the government, the community, or individuals, depending on the ownerships of the facilities. The majority of the facilities agreed that various stakeholders were involved in the determination of their land areas. The result also showed non completion of the stages of planning by the actors, and why utilisation of the facilities might be difficult, resulting from their poor planning, in the study area.

Table 4.25: problems encountered in the planning of health facilities (providers' perspectives)

Facilities		*Problems encountered in facility planning*				*Whether or not environment is conducive*	*Who is responsible for the choice of location*				*How the location made*
		Finance	Logistics	Human capital	Others		Government	People	Facility manager	Combination	Supported or not
Basic Health , Imeri		1	0	0	0	1	1	0	0	0	1
Basic Health , Iju		1	0	0	0	0	1	0	0	0	0
Adelabu Clinic, **Iju**		0	1	0	0	0	0	0	1	0	0
Maternity, Okeluse		1	1	1	0	1	0	1	0	0	1
Cottage Hospital, Okeluse		0	0	0	1	0	1	0	0	0	1
General Hospital, Iju		0	0	0	1	1	0	1	0	0	1
Comprehensive **Health**		1	0	0	0	0	1	0	0	0	0
General Hospital, Igbokoda		1	0	0	0	1	0	1	0	0	1
Ebenezer **Medical** Clinic, Igbokoda		0	1	0	0	1	0	0	1	0	0
Health Post, Iju		0	1	0	0	0	0	0	0	0	0
Ayemafuge **Hospital**, Igbokoda		0	1	0	0	0	1	0	1	0	1
Ife-Olu **Medical** Clinic, Iju		1	1	0	0	1	0	0	1	0	1
Adeyemi Hospital, Iju		0	0	0	1	1	0	0	1	0	1
Basic **Health** , Oberawoye		1	0	0	0	1	1	0	0	0	1
Total	Yes	57.14%	42.86%	7.14%	21.43%	57.14%	42.86%	21.43%	35.71%	0%	64.29%
	No	42.86%	57.14%	92.86%	78.57%	42.86%	57.14%	78.57%	64.29%	100%	35.71%

Source: Author's fieldwork, 2010

Table 4.25a provides the data on the suggested solutions to the problems of health care facilities' planning in the study areas. From the table, five facilities agreed that they created awareness on the need for modern health care system that would encourage the patronage of the facilities. Five (35.71 percent) facilities also suggested the repair of roads to encourage facilities' patronage, while four (28.57 percent) facilities agreed on increasing the transport provisions and modes. Seven (57.14 percent) suggested that staffing adequacy would solve health care problems, and the facilities that agreed on incentives and adequate equipment were nine (64.29 percent) and eleven (78.57 percent), respectively.

Table 4.25a: Suggestion towards improving the Planning of health facilities from the providers' perspective

Facilities		*Suggestion to improving the planning of healthcare facility in the area*					
		Awareness	Repair of roads	More transport and modes	Increase income level of staff	Give incentives to staff	Adequate equipment and staff
Basic Health Center, Imeri		0	0	0	1	1	1
Basic Health Center, Iju		0	0	0	0	1	1
Adelabu Clinic		0	0	0	0	0	1
Maternity, Okeluse		0	0	0	1	1	1
Cottage Hospital, Okeluse		1	0	0	1	1	1
General Hospital, Iju		0	0	0	0	0	1
Comprehensive health center		1	1	0	0	1	0
Igbokoda General Hospital		1	1	1	1	1	1
Ebenezer medical clinic, Igbokoda		0	0	0	1	0	1
Health Post, Iju		0	0	0	0	1	1
Ayemafuge, Igbokoda		0	1	1	1	1	0
Ife Olu medical clinic Iju		1	1	1	0	0	0
Adeyemi Hospital, Iju		0	0	0	0	0	1
Basic health centre Oberawoye		1	1	1	1	1	1
Total	Yes	35.71%	35.71%	28.57%	57.14%	64.29%	78.57%
	No	64.29%	64.29%	71.43%	42.86%	35.71%	21.43%

Source: Author's fieldwork, 2010

4.25 The management of health care facilities

Facility management means an established system for considering management or administrative issue (Muga, 2004). According to KSPA (2004), health facility must have a systematic and routine method for addressing management issues. These may be meetings to discuss day-to-day issues or meetings to discuss broader management aspects such as financing, utilisations or plans for health-related

campaigns. This sub-section takes care of the issue of management of health facilities which will enable it deliver services effectively and efficiently.

Table 4.25.1 presents the data on who managed the health facilities in the study area. Two (14.3 percent) general hospitals among the sampled facilities were managed by the state government; seven (57.14 percent) facilities were managed by the local governments; and five (35.71 percent) health facilities were owned and managed by private individuals. Intervals of meetings and issues discussed at meetings are also shown in the table 4.51. Data on the way and manner in which the management was being done, by assigning members of staff to share duties, indicate that three (21.43 percent), out of 14 facilities sampled, only met to assign staff who managed the facilities. Incidentally, one of them was private (Adelabu Clinic, Iju). Maternity, Okeluse, and Cottage Hospital, Okeluse, only had managerial meetings to discuss the sharing of drugs. Two (14.3 percent) facilities indicated they had joint meetings, although the essence of the meetings was not revealed. As important as coordination was, three (21.43 percent) facilities met on this basis, while only one (7.14 percent) facility met to share duties among its staff. On the arrangement and how the meetings were carried out, it could be deduced that not every facility met to carry out the fundamental tenets of management. The management meetings should foster effectiveness of the health care system. Each of the facilities, in fact, had different reasons that brought their staff together. The data is contained in Table 4.25.1.

Furthermore, on membership composition, Table 4.25.1 presents the result of the study on the categories of CHEWS (community health workers), health assistants, security men and gardeners. There appeared to be a high level of consideration in the facilities' management structures as the least category of workers was involved in the meeting. It implied that the facilities could be said to be sustainable since individual contributions at the meetings would affect the overall delivery of health system. Facilities where this all-embracing system of management was practised were three (21.43 percent).

Other groups in the managerial structure were auxiliary nurses and ward maids. These were observed in two (14.3 percent) private clinics, namely Adelabu Clinic, Iju and Adeyemi Clinic, Iju. It would not be surprising to have an auxiliary

nurse as a management team leader, in certain cases. This is captured in table 4.51. Two (14.3 percent) facilities (one private and the other publicly owned) had chairmen and executives as their management head. The implication of this on the publicly owned hospitals was that most chairmen were fond of using such management meetings as an opportunity for political campaigns.

Another management composition at the sampled health care facilities, in Ondo State, included head of department, matron and medical directors. As technicians or professionals, these groups might appear as not representative of the facilities' staff, because it obviously did not integrate all the cadres of staff. Indeed, this narrowed structure might have a negative long term effect on the management of the facilities. Four (28.57 percent) facilities were noted to have this management structure. The data is also presented in the Table 4.25.1 , as they are distributed across the facilities.

The Table, in addition, shows the management structure that encompasses everybody. In this regard, two (14.3 percent), out of the sampled facilities, complied with the ideal management structure requirement. The two facilities were Ebenezer Medical Clinic, Igbokoda, and Ife-Olu Medical Clinic, Iju. The providers had a good knowledge of management and teamwork as a means for the best output in project maximisation, by implication. Wahab (2003) referred to this as collaborative work. It is worth noting that the two facilities in the group were privately owned. The management and efficiency criteria which emphasise the collaboration between the people and the service provider in the management of facilities as well as in the allocation of facilities was not met, notwithstanding.

Table 4.25.1: Key Actors in healthcare facilities management

Facilities		*Those that were responsible for Health facility management*			*How it is done*						*Constituent of management team*				
		SG	LGA	Individual	Providing staffs	Drug supply	Joint management	Meetings	Coordination	Share duties	CHEWS, health assistance, security men and gardener	Auxiliary nurse/ward maid	Chairman & Executive	HOD, Matron, MD, Doctors	Everybody
Basic Health Center, Imeri		0	1	0	0	0	1	0	0	0	0	0	0	0	0
Basic Health Center, Iju		0	1	0	0	0	0	0	0	1	1	0	1	0	0
Adelabu Clinic		0	0	1	1	0	0	0	0	0	0	1	0	0	0
Maternity, Okeluse		0	1	0	0	1	0	0	0	0	1	0	0	0	0
Cottage Hospital, Okeluse		0	1	0	0	1	0	0	0	0	1	0	0	0	0
General Hospital, Iju		1	0	0	0	0	0	1	0	0	0	0	0	1	0
Comprehensive health center		0	1	0	1	0	0	0	0	0	0	0	0	1	0
Igbokoda General Hospital		1	0	0	0	0	0	0	1	0	0	0	0	1	0
Ebenezer medical clinic, Igbokoda		0	0	1	0	0	0	0	1	0	0	0	1	0	1
Health Post, Iju		0	1	0	1	0	0	0	0	0	0	0	0	0	0
Ayemafuge, Igbokoda		0	0	1	0	0	0	0	1	0	0	0	0	1	0
Ife Olu medical clinic Iju		0	0	1	0	0	0	1	0	0	0	0	0	0	1
Adeyemi Hospital, Iju		0	0	1	0	0	1	0	0	0	0	1	0	0	0
Basic health centre Oberawoye		0	1	0	0	1	0	0	0	0	1	0	0	0	0
Total	Yes	14.3%	57.14%	35.71%	21.43%	21.43%	14.3%	14.3%	21.43%	7.14%	28.57%	14.3%	14.3%	28.57%	14.3%
	No	85.7%	42.86%	64.29%	78.57%	78.57%	85.7%	85.7%	78.57%	92.86%	71.43%	85.7%	85.7%	71.43%	85.7%

Source: Author's fieldwork, 2010

4.25.2 Health facilities management meeting (providers' perspectives)

Table 4.25.2 presents the data on the time of meeting of the management team and personnel management issues in each facility. Ten (78.57 percent) respondents claimed they met once in a month, while three indicated that they met quarterly. There was no response in Igbokoda. This meeting frequency may be said to be encouraging, and to some extent, it complied with the recommendation by PHC committees for health care facility management to be effective (NPHCDA, 2001).

In respect of how the posting of staff were being done, Table 4.25.2 gives the study outcome. It shows that the majority of the facilities' staff, 10 (71.43 percent), claimed to receive their postings based on needs (as the needs arise), while only one (7.14 percent) agreed that the staff's posting was politically initiated. In the area of discipline of the staff whenever they committed offences, more than half of the facilities, 10 (71.43 percent), used query as a means of punishment, while only one (7.14 percent) facility used the method of suspension. However, Ife-Olu Medical Clinic sent its members of staff on training and later compensated them. This might contradict the conventional belief that 'the finger that sins must be cut off'. By sending the offender on training, it was believed he or she would be denied salary payment. It was believed that by the time he/she finished the training, the aquired knowledge would still be used for the development of the system. Surely, this approach cannot be said to answer to any management theory.

On the issue of how the staff were being rewarded, every (82.86 percent) facility surveyed used salaries as a way of compensating or rewarding their staff, except one (7.14 percent), Ife-Olu Medical Clinic, Iju, where bonus was given to the members of staff. No doubt, incentives have a significant role to play in improving every staff's contribution to the overall delivery of health care. With the current minimum wage by the federal government, salaries alone may not be enough to motivate the staff to perform maximally. As noted by KSPA (2004), the health care budget allocation had continued to be skewed in favour of tertiary and secondary health care facilities, which absorbed 70 percent of health expenditure. Yet, primary health care units, being the first point of contact with the population, provide the bulk of health services, and are cost-effective in dealing with the disease conditions prevalent in a community.

How the equipments were procured for the facilities is further shown in the data in Table 4.25.2 . According to NPHCDA (2004), equipments were essential parts of any health facility. Such equipments were needed for purposes like diagnostic procedures, laboratory re-agents, and convenience of patients (as with trolleys and beds), while some others like thermometer were used to determine the seriousness of the signs and symptoms. From the Table 4.25.2 , procuring this equipment was mainly the responsibility of the LGAs and the private hospitals. Nine (64.29 percent) out of the facilities surveyed had the government as the procurer of equipments, as against five (35.71 percent) where the procurers were the private owners. In the management of health services, Mugal et al. (2004) argued that for effective management there must be regular scheduled meetings with specific staff members, having defined areas of responsibilities. The result in Table 4.25.2 shows that all the facilities involved staff membership in the management. Considering this, one would have expected their health service delivery to be effective as a consequence.

In Table 4.25.2 the issue of community involvement is another variable studied. The analysis of the result shows that ten (71.43 percent) out of the 14 (100.0 percent) sampled facilities involved their communities in the management of health care. Out of the ten, three private (21.43 percent) hospitals were involved in doing this. This implied that those facilities that did not involve their communities might not enjoy a high patronage. KSPA (2004) has articulated that community involvement in the management would encourage the community input into facility's function and made the facility more accountable to the community it served and helped it understand the community's needs. In this regard, it is expected that management efficiency, accountability and transparency would be possible.

In general, the management of health care facilities could be said to be adequate, given the larger percentage of health care facilities that enjoyed routine management meetings. This would encourage the effective running of health care system. However, some of the basic stages of the meeting and the number of times they ought to meet had not been followed strictly. The majority of the providers involved the community in the key management meetings.

Table 4.25.2: Adopted management strategy of healthcare facilities (provider's perspective)

Facilities		*Meeting Time*		*How staff posting is conducted*		*How staff are discipline*			*How staff are rewarded*		*How facility equipment are procured*		*Were you given a free hand to manage*	*community involvement in the management*
		Monthly	Quarterly	Politically motivated	As the need arises	Query	Suspension	Send on training compensation	Salaries	Bonuses	LGA	Others		
Basic Health Center, Imeri		1	0	0	1	1	0	0	1	0	1	0	1	1
Basic Health Center, Iju		1	0	0	1	1	0	0	1	0	1	0	1	0
Adelabu Clinic		1	0	0	1	1	0	0	1	0	0	1	1	0
Maternity, Okeluse		1	0	0	1	1	0	0	1	0	1	0	1	1
Cottage Hospital, Okeluse		1	0	0	1	1	0	0	1	0	1	0	1	1
General Hospital, Iju		1	0	1	0	1	0	0	1	0	1	0	1	1
Comprehensive health center		1	0	0	1	1	0	0	1	0	1	0	1	1
Igbokoda General Hospital		0	0	0	0	1	0	0	1	0	0	1	1	0
Ebenezer medical clinic, Igbokoda		1	0	0	1	1	0	0	1	0	0	1	1	0
Health Post, Iju		1	0	0	1	1	0	0	1	0	0	1	1	1
Ayemafuge, Igbokoda		1	0	0	1	1	0	0	1	0	1	0	1	1
Ife Olu medical clinic Iju		0	1	0	0	0	0	1	1	1	1	0	1	1
Adeyemi Hospital, Iju		0	1	0	0	0	1	0	1	0	0	1	1	1
Basic health centre Oberawoye		1	0	0	1	1	0	0	1	0	1	0	1	1
Total	Yes	78.57%	14.3%	7.14%	71.43%	85.7%	7.14%	7.14%	100%	7.14%	64.29 %	35.71 %	100%	71.43%
	No	21.43%	85.7%	92.86%	28.57%	14.3%	92.86%	92.86%	0%	92.86%	35.71 %	64.29 %	0%	28.57%

Source: Author's fieldwork, 2010

Table 4.25.3 captures the study result on the major challenges faced in the management system of the health care facilities. Seven (57.14 percent) health facilities indicated finance as their major challenge, and it ranked highest in the distribution. Three (21.43 percent) facilities, among the seven, were privately owned. Only Cottage Hospital, Okeluse had logistics as a major challenge. Two (14.3 percent) facilities had the challenge of human capital inadequacy. Five out of the entire sampled facilities did not respond. WHO (2008) has asserted that in developing health system various stakeholders might and should provide financial resources for health interventions and for initiatives at the community level rather than exclusively from the health ministry budget. Financial problem, if not solved, by implication, may pose a serious challenge to health service delivery.

Table 4.25.3: Challenges of managing health facility from providers' perspective.

Facilities					
		Finance	Logistics	Human capital	Others
Basic Health Center, Imeri		1	0	1	0
Basic Health Center, Iju		0	0	1	0
Adelabu Clinic		0	0	0	1
Maternity, Okeluse		0	0	0	1
Cottage Hospital, Okeluse		0	1	0	0
General Hospital, Iju		1	0	0	0
Comprehensive health center		0	0	0	1
Igbokoda General Hospital		0	0	0	1
Ebenezer medical clinic, Igbokoda		0	0	0	1
Health Post, Iju		1	0	0	0
Ayemafuge, Igbokoda		1	0	0	0
Ife Olu medical clinic Iju		1	0	0	0
Adeyemi Hospital, Iju		1	0	0	0
Basic health centre Oberawoye		1	0	0	0
Total	challenge	57.14%	7.14%	14.3%	35.71%
	Not a challenge	42.86%	92.86%	85.7%	64.29%

Source Author's fieldwork 2010

Table 4.25.4 presents the data on responses on how to improve the management of the health care facilities. From the table, six (42.86 percent) facilities suggested that creating awareness would enhance the effectiveness of the management of facilities while the repair of roads was suggested by seven (50.0 percent) facilities. Six (42.86 percent) facilities suggested the increment of staff's level of income as a way out, while equipping the hospital and ensuring adequacy of staff were suggested by eight (57.14 percent) facilities. Incentives to staff, increasing transport facilities and modes and partnership with community in the management of health facilities were said to be a way out by five (35.71 percent), eight (57.14 percent) and six (42.86 percent) facilities, respectively. The distributions across the facilities on these suggestions are contained in Table 4.25.4.

In terms of whether or not facilities had routine meetings for management, all the respondents agreed that their facilities had routine meetings for management. This shows they understood the importance of management and the leadership must have embarked on strategies that would help in making facilities sustainable. The question was further asked on how often the management met to deliberate on facilities issues. The result in table 4.54 shows that majority of the management meetings were held every month. Ten (57.14 percent) out of the 14 facilities sampled belong to this category. Two (14.3 percent) of the facilities met between two to three months, one (7.14 percent) met every four to six months, and one (7.14 percent) met in less than six months but not regularly. Irregularity in the management meetings might, by implication, affect the decisions that bordered on the overall health care delivery and the facility's patronage negatively.

Table 4.25.4: Strategies to improving the management of personnel of health facilities (providers' perspective)

Facilities		*Suggestions for improving management of healthcare facility*							*Whether or not the facility has a routine management*	*How often meeting held to discuss facility management and administrative matters*			
		Awareness	Repair of roads	Increase in income level of staffs	Equipment of available facility & Staff	Incentives to staff	Increase transport and mode	Partnership with community in management		Monthly	Every 2 months	Every 4-6 months	Less than 6 months or not regular
Basic Health Center, Imeri		0	1	0	1	1	1	1	1	1	0	0	0
Basic Health Center, Iju		0	0	1	0	0	0	0	1	1	0	0	0
Adelabu Clinic		0	1	0	0	0	0	1	0	0	0	0	1
Maternity, Okeluse		0	1	1	1	0	1	0	0	0	1	0	0
Cottage Hospital, Okeluse		0	0	0	1	1	1	0	1	1	0	0	0
General Hospital, Iju		1	0	0	1	1	1	0	1	1	0	0	0
Comprehen health center		1	1	1	1	1	0	0	1	1	0	0	0
Igbokoda General Hospital		1	1	1	1	1	1	1	1	1	0	0	0
Ebenezer medical clinic, Igbokoda		1	1	0	0	0	1	1	1	1	0	0	0
Health Post, Iju		0	0	0	0	0	1	0	1	1	0	0	0
Ayemafuge, Igbokoda		0	0	0	0	0	1	1	1	1	0	0	0
Ife Olu medical clinic Iju		1	1	1	1	0	0	0	1	0	0	1	0
Adeyemi Hospital, Iju		1	0	0	0	0	0	0	1	0	1	0	0
Basic health centre Oberawoye		0	0	1	1	0	0	1	1	1	0	0	0
Total	Agreed	42.86%	50%	42.86%	57.14%	35.71%	57.14%	42.86%	85.7%	57.14%	14.3%	7.14%	7.14%
	Disagreed	57.14%	50%	57.14%	42.86%	64.29%	42.86%	57.14%	14.3%	42.86%	85.7%	92.86%	92.86%

Source Author's fieldwork 2010

4.25.5 Citizen's participation in the management of health care facilities

Table 4.25.5 presents the data on whether or not the official records of the management meetings were being kept or not. 11 (78.57 percent) facilities, out of the 14 sampled, were said to be keeping the records, apart from Ife-Olu Medical Clinic, Iju, and Adelabu Clinic, Iju. The keeping and maintenance of meeting records helps in formulating action plan (WHO, 1992). WHO stated that FMOH (NPHCDA, HQ) should intensify capacity building at all levels of PHC so that they could collect and process data for action, for instance. In the respect of management meeting record-keeping, the study result was quite encouraging.

As shown in Table 4.25.5, less than half, six (42.86 percent), of the facilities surveyed agreed to have routine meetings on facility' activities or management issues that included both facility staff and community members. A greater number of facilities, eight (57.14 percent) did not indicate so. This negated the immense contributions the communities might have in the overall management system in respective domains, particularly in reinforcing the top-down approach in the health care system.

Only six (42.86 percent) out of the entire facilities sampled sought feedback from the community and this shows there was no full representation of the people in heath care planning and management. Out of the 14 sampled facilities, only six (42.86 percent) involved the communities in their management activities. This deficiency would have serious implication for health care delivery in the rural setting where the communities' health needs were peculiar. It would distort the monitoring aspect of planning, especially, which was very vital. As said earlier, management should bring together all the stakeholders for it to improve health care delivery (Wahab, 2004).

In the study areas, avenues through which facility collected feedback on the quality of services provided by it are presented in the table 4.55, moreover. No facility used suggestion box at all, while one facility used quality assurance survey. Of all the facilities surveyed, only one (7.14 percent), Basic Health Center, Imeri, used general complaint review, and in the case of involvement of community representatives in the meeting, two (14.3 percent) facilities were found to use the method. However, common dialogue seemed to be the common way used by nine (64.29 percent) facilities in the study area. This further showed the need for community participation in the health care management. The result shows that the responses for other methods

of collecting feedback, beside community dialogue, were very low. Incidentally, the use of community dialogue was prominent among the private hospitals than government-owned hospitals. This might be in the interest of profit maximisation or, at best, ordinary concern for the people.

Generally, having discussed on the routine management meeting earlier, the feedback mechanisms requiring the managers to act accordingly has not been given due consideration. Apparently, from the table analysis, the majority of the health care facilities did not receive feedback. This was a crucial management loophole in the existing health care facilities. The analysis further reveals that the people's participation in the management of the facilities had had important setbacks. Certainly, this would have a negative consequence on the utilisation of the facilities, in terms of patronage.

Table 4.25.5: The management meetings, records activities and information of health facilities from the providers' perspective

Facilities		*Official records of meetings management maintenance status*	*Any routine meetings about facilities activities that include both facility staff & community members*	*Does the facility give its key management decisions to the community during such routine meetings*	*Feedback on quality of services provided by the facility*				
					Suggestion box	Quality assurance survey	General complaint review	Involvement of community representatives in meetings	Community dialogue
Basic Health Center, Imeri		1	1	1	0	0	1	1	0
Basic Health Center, Iju		1	1	0	0	0	0	1	0
Adelabu Clinic		0	0	0	0	1	0	0	0
Maternity, Okeluse		1	0	0	0	0	0	0	1
Cottage Hospital, Okeluse		1	1	1	0	0	0	0	1
General Hospital, Iju		1	0	0	0	0	0	0	1
Comprehensive health center		1	1	1	0	0	0	0	1
Igbokoda General Hospital		1	0	0	0	0	0	0	1
Ebenezer medical clinic, Igbokoda		1	0	0	0	1	0	0	0
Health Post, Iju		1	1	1	0	0	0	0	1
Ayemafuge, Igbokoda		1	1	1	0	0	0	0	1
Ife Olu medical clinic Iju		0	0	0	0	0	0	0	1
Adeyemi Hospital, Iju		1	0	0	0	0	0	0	1
Basic health centre Oberawoye		0	0	1	0	0	0	0	0
Total	Exist	78.57%	42.86%	42.86%	0%	14.3%	7.14%	14.3%	64.29%
	Does not exist	21.43%	57.14%	57.14%	100%	85.7%	92.86%	85.7%	35.71%

Source: Author's fieldwork, 2010

Table 4.25.6 presents the data on suggestions on what should be done to improve the health status of the people in the rural areas of Ondo State. The result shows a number of suggestions by the facilities' managers. Educating the community on the importance of health ranked highest in the responses, indicated by five (35.71 percent) out of 14 sampled facilities. Two (14.3 percent) facilities suggested that equipping the hospitals with equipments and drugs would lead to improvement in the people's health status. For those who would like the government to provide the hospital equipments, one (7.14 percent) facility agreed to it. Most of these suggestions were given by the public facilities. The last suggestion made by two (14.3 percent) facilities bordered on increasing the number of staff.

Table 4.25.6: Suggestions on the improvement of the health status of people from the providers' perspectives

Facilities		*Suggestions on other things that could be done to improve the health status of the people*				
		educateof the health status	The community importance of health status	Equipping the hospital with equipment and drugs	Government should equip the hospital	Increase the number of staff
Basic Health Center, Imeri		0	1	0	0	0
Basic Health Center, Iju		0	0	0	0	0
Adelabu Clinic		0	0	0	0	0
Maternity, Okeluse		0	0	0	1	0
Cottage Hospital, Okeluse		0	0	1	0	0
General Hospital, Iju		0	1	0	0	0
Comprehensive health center		0	0	0	0	0
Igbokoda General Hospital		0	0	0	0	1
Ebenezer medical clinic, Igbokoda		0	0	0	0	1
Health Post, Iju		0	1	0	0	0
Ayemafuge, Igbokoda		0	0	1	0	0
Ife Olu medical clinic Iju		0	1	0	0	0
Adeyemi Hospital, Iju		0	1	0	0	0
Basic health centre Oberawoye		0	0	1	1	0
Total	Yes	0%	35.71%	21.43%	14.3%	14.3%
	No	100%	64.29%	78.57%	85.7%	85.7%

Source: Author's fieldwork 2010

CHAPTER FIVE

DISCUSSION OF MANAGEMENT RESULT

Perceptions on health care facility planning and management

5.0 Introduction

In this section, the concern is primarily the perceptions of respondents in the planning and management of health care facilties in the study area, Ondo State. Issues to be considered in this respect include the perception of people on planning of health care facilities; the perception of people on the management of health care facilities; the profile of health status index; the pattern of health status of the people; the patronage of health care facilities; and proposal for the new health care facilities in the study area. Table 5.1 presents the data on the perceptions of the people on the planning and management of health facilities. Information on each variable was elicited from the question asked.

5.1. Perception of Respondents on Facility Planning

On the the planning of the health care facilities, the first question asked from the respondents was on the location of health facilities. From the table 5.1, it is clear that 287 (29.0 percent) of the respondents agreed that they were contacted on the location of health care facilities in their communities. This was rather very low. Meanwhile, respondents from Odumogun (68.8 percent) indicated that they were sidelined in the decision on facility location. The implication is that more than half of the respondents from various settlements were contacted before the location of facilities. WHO (2004) has emphasized on active community engagement in the provision of PHC services in the spirit of the Bamako initiative of 1987. In this regard, the criterion of citizen participation was met.

The respondents were asked on affordability of charges. The result in the table shows that, generally, affordability level was high with less than half of the respondents, 366 (37.0 percent). Notwithstanding, medical charges seemed to be very high in Okeluse, indicated by 65 (55.6 percent), and Ugbo, 28 (56.0 percent), accounting for more than half of the respondents. Other areas seemed not to have the problem of high charges, meaning they were prepared to pay for the health care services irrespective of the charges. In this regard, Drummond and Mills (1983)

submitted that while costs of large scale PHC programs might be lower than 2 percent of annual per capita GNP on their entire health sector, they might not be providing effective services. So, the cost and value of system as criterion in economic domain is deficient, in this context. This borders on the value that the system will take into consideration – how satisfied users and patients are with the system in terms of services costs.

The question on whether or not the respondents were involved in the site selection was asked. The result shows that 340 (34.4 percent) agreed that they were not informed. Since the number involved was higher than this percentage, it should be concluded that people were involved in the site selections for the facilities. However, variation across the settlements revealed that Idi-Ogba and Odumogun were not involved in the decision on site locations of the facilities, accounting for more than half of the respondents, 45 and 12 (57.0 and 75.0 percentages), respectively.

The question on whether the respondents travelled far before reaching the facilities was asked too. The result on the table 5.1 shows that 847 (85.2 percent) of the respondents did not travel far before accessing health facilities. It confirmed the earlier result on the proximity of the facilities where more than half of the respondents did not travel far before reaching the facilities. This applied to all the settlements across the study area.

The next question asked was whether there were equipment for treatments when the facilities were visited. From the table, more than half of the respondents indicated that there were no equipment. The variation on those that so disagreed is presented on table 5.1. This result also confirms the previous result in this section. Patients' satisfaction criterion in organizational domain was grossly deficient (see plate 4.3). The people were asked if drugs were available, moreover. The result shows that there were no drugs when last some respondents visited the health facilities. These were 625 (63.2 percent), accounting for more than half of the respondents.

In terms of clean environment, respondents were asked if the environment of the facilities were clean. By standard, strict personnel and environmental hygiene should be practised to reduce disease transmission within the facility (DHSP, 1999). The personnel and environmental hygiene has to do with washing of hands with soap each time a client has any contact with others. From the table, there was a high level of environmental hygiene at the facilities in the study area, as against 120 (12.1 percent) of the respondents who said the facilities were not clean. However, the knowledge of clean environment might only refer to facility surrounding and not the technical cleanliness. The technical cleanliness would include facility's provision for water testing and quality monitoring services. Variation across the settlement on environmental and personnel cleanliness is contained in table 5.1.

The question on whether the respondents were attended to at the facilities in times of emergency was asked. The result indicates that more than half of the respondents (56.1 percent) were attended to, while 434 (43.9 percent) indicated their answers in the negative. In general, it could be concluded that the people enjoyed prompt attention in times of emergency. The technical evaluation domain certified this result; it is reliable at the peak period, during emergency.

Collaboration between the community and the health service providers is very crucial. The question raised in this regard was to investigate whether a relationship between community and service provider ever existed. On this, the table presents 412 (41.7) respondents to have indicated that collaboration existed among the various settlements of the study and health services' providers. There were variation, with 51.7 respondents from Idi-Ogba and 62 from Okeluse and Oladele & others, accounting for 64.6, 70.0 and 53.0 percent, respectively. This result negates the idea that the national health system is repleted with many cases of ill-defined health care services characterised with disconnection between the people and the service providers as argued by FMH (2006). To some extent, citizen participation was allowed in health care planning in the study area.

Cultural consideration is a vital aspect when considering planning the local participation of the people. This is necessary if the system or project is to be sustainable. The question was asked on whether cultural consideration was taken into consideration in respect of the location and designs of the health facilities in the study area. The result shows that people who agreed that cultural consideration was

involved were more than those that disagreed. This meant that the people's culture was built into the facility planning process. Those that disagreed were 359 (36.3 percent) of the respondents, further confirming the issue of social impact of health facilities' planning in the study area.

With regards to question on whether there were doctors as at the last time of visit by the respondents, the table result shows that more than half of the people found doctors at the facilities, as against 428 (43.3 percent) that indicated otherwise. It could be concluded that the majority of the people met doctors as at the last time they visited the facility. Related to this question was whether or not members of staff were enough at the facilities at the time of visit. The Table shows that there was gross staff inadequacy, indicated by 298 (30.1 percent) respondents. This supported the argument that the area generally suffered from inadequate medical staff, as presented earlier in this section. Meanwhile, the variation across the settlements on questions bordering on health care facility planning is captured in Table 5.1

Plate 5.1: Basic Health Centre without staff and equipment during study at Igbonla in Ilaje LGA
Source: Authors' fieldwork, 2010

Table 5.1: Perception of the people on the planning of health care facilities

Area	Contacted on location		Affordablility of charges		Involved in site selection		Travel far to obtain treatment		Equipment available for treatment		Availabilty of drugs in the last visit		Sanitary condition of the environment		Prompt attention during emergency		Collaboration between the community & the providers		Cultural consideration before location		Availability of doctor in time of visit		Staff adequacy	
Igbokoda	39.1	91	35.6	83	39.9	93	83.7	195	45.9	107	60.5	141	10.7	25	53.6	125	40.3	94	33	77	40.2	103	27	63
Ugbo	28	14	56	28	30	15	72	36	70	35	70	35	18	9	68	34	44	22	44	22	84	42	8	4
Uale Nla	7.1	1	35.7	5	28.6	4	78.6	11	78.6	11	71.4	10	21.4	3	64.3	9	28.6	4	35.7	5	71.4	10	7.1	1
Oberawoye	18.9	14	29.7	22	27.7	22	79.7	59	67.6	50	56.8	42	18.9	14	48.6	36	44.6	33	28.4	21	44.6	33	37	27
Idi-Ogba	26.6	21	46.8	37	57	45	89.9	71	67.1	53	65.8	52	11.4	9	54.4	43	64.6	51	35.4	28	44.3	35	23	18
Odumogun	68.8	11	37.5	6	75	12	93.8	15	6.3	1	68.8	11	12.5	2	25	4	6.3	1	68.8	11	12.5	2	63	10
Iju	23	77	33.1	111	27.2	91	85.7	287	49.3	165	55.8	186	5.1	17	35.8	120	37.9	127	30.7	103	38.8	130	30	99
Araromi Camp II	20	3	20	3	20	3	80	12	33.3	5	60	9	0	0	20	3	33.3	5	73.3	11	20	3	53	8
Oladele & others	30	3	40	4	30	3	70	7	50	5	90	9	20	2	70	7	70	7	70	7	50	5	40	4
Okeluse	30.8	36	55.6	65	32.5	38	95.7	112	86.3	101	92.3	108	30.8	36	41	48	53	62	47	55	51.3	60	38	44
Imeri	34.8	16	4.3	2	30.4	14	82.6	38	56.5	26	47.8	22	6.5	3	10.9	5	13	6	41.3	19	10.9	5	44	20
Total	29	287	37	366	34.4	340	85.2	847	56.5	559	63.2	625	12.1	120	43.9	434	41.6	412	36.3	359	43.3	428	30	298

Source: Author's field work in 2010.

5.2 The perception of people on the management of health care facilities

The national health policy in Nigeria emphasizes active community engagement in the provision of PHC services in the spirit of the Bamako Initiative of 1987. The Bamako initiative was institutionalised in Nigeria through the creation of development committees at the district and village level. The Committees were referred to as District and Village Development Committees, having explicit guidelines for their respective duties and responsibilities. Responses by the respondents on whether the Village Development Committee (VDC) ever existed in the study area are shown in table 5.2.

The table 5.2 indicated that VDC existed in the areas with 784 (79.3 percent) of the respondents indicating so, as against 205 (20.7 percent) who indicated otherwise. However, there was a considerable degree of variation across the settlements. For instance, Araromi Camp II, Oladele and others and Imeri seemed to have a high proportion of response in favour of the existence of VDC: the respondents were 14, 10 and 42 (93.3, 100.0, and 91.3 percents), respectively. The implication was, should the VDC have existed, it would accelerate the functionality of health care delivery through efficient health facility management.

Table 5.2: Respondent on the existence of village development committee

Area	*Exist o/o*	*No*	*Does not Exist o/o*	*No*	*Percentage o/o*
Igbokoda	76.0	117	24.0	56	100.0
Ugbo	74.0	37	26.0	13	100.0
Uale Nla	85.7	12	14.3	2	100.0
Oberawoye	68.9	51	31.1	23	100.0
Idi Ogba	51.9	41	48.1	38	100.0
Odumogun	56.3	9	43.8	7	100.0
Iju	87.2	292	12.8	43	100.0
Araromi Camp II	93.3	14	6.7	1	100.0
Oladele & others	100.0	10	0.0	0	100.0
Okeluse	84.6	99	15.4	18	100.0
Imeri	91.3	42	8.7	4	100.0
Total	79.3	784	20.7	205	100.0

Source: Author's fieldwork, 2010

5.3 The Role VDC Training in Health Issues

Table 5.3 shows the result of the number of VDC that were trained on health issues. This is necessary because the better trained people are on health issues, the

better accessible health care services and planning will be to the people. FMCH (2006) stated as part of the goals of PHC that villages or communities were responsible for the dissemination of health information, deciding on local priority health problems planning, implementation and monitoring of health programs, mobilizing resources for health identification of TBAs and HIVs, and for training. The result was based on those that indicated the existence of VDC (79.3 percent). Those who indicated that 1, 2, 4 and 12 persons were trained accounted for 1.6 percent though; this varies across the settlement. Respondents on the same issue accounted for 10.7 percent high in Oberawoye compared with 3.8 percent in Ugbo. The highest proportion of respondents accounted for 9.6 and 8.7 percent who sent 5 persons and 10 persons for training on health issues. This is followed by 5.3, 3.6 and 2.2 percent who sent 15, 20, 7 and 3 persons, respectively for training. The least 1.1and 0.3 percent sent 6 and 30 people. The training shows that there was, indeed, Village Development Committee with full awareness on health matters as less than half of the villages were trained.

Table 5.3: Respondents' perception on the number of VDC trained on health issues

Area	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*10*	*12*	*15*	*16*	*20*	*30*
Igbokoda	0.0	1.0	1.0	1.0	5.9	0.0	2.0	4.9	16.7	2.0	4.9	0.0	4.9	1.0
Ugbo	3.8	3.8	3.8	0.0	3.8	11.5	0.0	0.0	11.5	0.0	3.8	0.0	7.7	0.0
Uale Nla	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oberawoye	10.7	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0
Idi-Ogba	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0
Odumogun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Iju	0.0	1.9	3.8	1.0	18.1	1.0	4.8	3.8	10.5	1.9	7.6	1.0	3.8	0.0
Araromi Camp II	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0
Oladele & others	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Okeluse	5.0	2.5	0.0	5.0	12.5	0.0	10.0	2.5	7.5	5.0	2.5	0.0	2.5	0.0
Imeri	0.0	0.0	15.4	7.7	0.0	0.0	0.0	0.0	0.0	0.0	30.8	0.0	0.0	0.0
Total	1.6	1.6	2.2	1.6	8.7	1.1	3.6	2.7	9.6	1.6	5.5	0.3	3.6	0.3

Sources: Author's field work in 2010.

5.4 VDC participation in facilities' management

Table 5.4 shows the study result on whether or not the VDC participated in the management of health facilities in their communities. This result is based on 784 (79.3) respondents who indicated that there was VDC in their communities. From the table 5.4, 278 (42.31 percent) agreed that they participated actively in the management of health facilities, while a high proportion of respondents, 379 (57.69 percent), said that they did not paticipate in the facilities' management. There was relative variation across the settlements. For instance, 10 (83.33 percent) respondents in Uale Nla, 11 (78.57 percent) in Araromi Camp II, and seven (77.88 percent) in Oladele and others did not indicate any participation in the management of health care facilities. Meanwhile, the previous result shows that people were involved in the VDC but not as much in the management of the health facilities, meaning that somehow the people's involvement in health care management suffered some setback in the study area.

Table 5.4: VDC participation in the management of facility in the study area

Area	*No of Participant*	*%*	*Does'nt Participate No*	*%*
Igbokoda	41	27.70	107	72.30
Ugbo	16	48.49	17	51.51
Uale Nla	2	16.67	10	83.33
Oberawoye	14	40.0	21	60.00
Idi Ogba	8	23.53	26	76.47
Odumogun	0	0.00	8	100.00
Iju	105	42.51	142	57.49
Araromi camp II	3	21.43	11	78.57
Oladele and others	2	22.22	7	77.88
Okeluse	58	72.50	22	27.50
Imeri	29	78.38	8	21.62
Total	278	42.31	379	57.69

Sources: Author's fieldwork, 2010

5.5 VDC's role in the facilities' planning and management

The role of VDC in the planning and management of facility from the users' perspective is captured in table 5.5. The variables considered in this respect of VDC role are: sharing of drugs, campaigning, financing, proper caring and adequate security of facilities. One of the roles of the VDC was to ensure collaboration between the health providers and the community in proper caring and security of facilities. Compared with other roles, the respondents on proper caring and facility security as roles of the VDC were low, accounting for 2.81%, while other roles, like sharing of drugs provided by donor agencies, financial monitoring and evaluation, were indicated by 45, 37 and 205 (5.75, 4.74 and 6.52 percents) respondents, respectively. Meanwhile, politics and the sensitisation of the people on election matters tended to be very high with 44 (77.77 percent) respondents indicating them as the VDC roles. Also, campaigning was indicated by 1.8 percent of the respondents. Although, going through the settlements profile, variation was noticed as issues of more importance on health were discussed more in Okeluse and Imeri with one (0.13 percent) respondent, and as low as one (1.3 percent) respondent in Idi-Ogba.

In respect of drugs, the variation is contained in table 4.40. There are other matters which were not taken into consideration.

Table 5.5: The role of VDC in the planning and management of existing facility

Area	*Sharing of drugs*		*Campaigning*		*Financial*		*For proper caring & adequate security of facilities*		*Monitoring and Evaluation*		*Sensitizing the people*		*0thers*	*Percentage*	
Igbokoda	3	0.38	3	0.38	6	0.77	2	0.26	0	0.00	56	0.77	6	20.03	233
Ugbo	3	0.38	3	0.38	2	0.26	2	0.26	0	0.00	13	0.38	3	3.061	50
Uale Nla	1	0.13	0	0.00	0	0.00	0	0.00	0	0.00	2	0.00	0	1.40	14
Oberawoye	2	0.26	2	0.26	4	0.51	2	0.26	1	0.13	23	0.26	2	4.85	74
Idi Ogba	1	0.13	0	0.00	0	0.00	1	0.31	0	0.00	38	0.26	2	4.72	79
Odumogun	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	7	0.00	0	1.15	16
Iju	18	2.30	10	1.28	10	1.28	2	0.26	13	1.66	43	2.30	11	29.08	335
Araromi camp II	2	0.26	0	0.00	0	0.00	0	0.00	0	0.00	1	0.00	0	1.53	15
Oladele & others	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	10	1.28	10
Okeluse	11	1.4	0	0.00	10	1.28	5	0.64	5	0.64	18	1.02	8	7.65	117
Imeri	4	0.51	0	0.00	5	0.64	2	0.26	3		4	1.53	12	2.04	46
Total	45	5.75	18	2.30	37	4.74	16	0.07	22		205	6.52	44	77.77	

Source: Author's fieldwork, 2010

5.6 Frequency of VDC meetings

The frequency of meetings held within a period of time has a significant effect on the overall outcome of health facility management. According to the national guidelines for PHC committees, the staff must meet every month (Joshua et al., 2001). From the result in table 5.6, it is clear that 74 (9.72 percent) of the respondents attended meetings less than once in a month, while 120 (15.77 percent) respondents indicated that management meetings were held twice in a month. However, those who attended meetings in three months and above ranked highest, with 276 (35.74 percent) respondents indicating so. 90 respondents (11.83 percent) did not attend any meeting at all.

There is, however, variation across the settlements pattern. For instance, in Uale Nla, 66.7 percent, a high percentage of the respondents, attended meetings in three months and above, as compared with 13.3 percent in Araromi Camp II within the same time period. Those that attended twice in three months accounted for a high percentage (60.0 percent) in Araromi Camp II and as low as 0.0% in Uale Nla. This implied that, though they met to deliberate on issues, it was not on a regular basis. This irregular management meeting could affect effective health care management inhibit service delivery.

Table 5.6: The number of meetings held by VDC in the last three months

Area	*Less than one*		*Twice*		*Three and above*		*None*		*Total%*
	No	%	No	%	No	%	No	%	
Igbokoda	15	15.46	12	12.32	39	60.83	11	11.34	100.0
Ugbo	3	9.38	3	9.38	24	75.00	2	6.25	100.0
Uale Nla	1	10.0	0	0.00	8	50.0	2	25.00	100.0
Oberawoye	2	6.25	5	15.63	17	53.13	8	25.00	100.0
Idi Ogba	4	13.79	2	6.90	12	41.38	11	37.93	100.0
Odumogun	2	33.33	2	33.33	2	3.33	0	0.00	100.0
Iju	17	7.76	63	28.77	96	43.84	43	19.65	100.0
Araromi camp II	3	21.43	9	64.29	2	14.29	0	0.00	100.0
Oladele and others	3	37.5	2	25.00	2	25.00	0	12.50	100.0
Okeluse	18	23.38	17	22.08	31	40.26	11	14.29	100.0
Imeri	6	18.75	5	15.63	19	59.38	2	56.25	100.0
Total	74	9.72	120	15.77	272	35.74	90	11.83	100.0

Sources: Author's fieldwork, 2010

5.7 Respondents' reasons for not attending meetings

Table 5.7 provides the data on why the respondents did not attend management meetings. The entire result is generated from the 32.3 respondents who indicated non-attendance of meetings. Overall, 0.13 percent indicated the reason they did not attend meetings as just not being around for three weeks, as in Iju. There was no response from other settlements. As regards the second reason, non-availability of medical personnel, particularly doctors, was the reason indicated by 0.13 percent of the respondents. This reason ranked higher above others indicated by the respondents. The implication truly was that, if any matter relating to health was discussed and no doctors were present, it would not encourage the people to attend meetings. Others from Igbokoda, who said there was no way forward, accounted for 0.57 percent. Similarly, other factors such as no encouragement, no unity, because there was no VDC trained on health, not available in towns (that is, respondents), political problems, self-centerdness of the health facility managers, people not available and not calling for meetings, all accounted for 0.13 percent. These factors most probably could be due to lack of orientation on the importance of village meetings

Table 5.7: Perception on why respondents do not attend meetings

Area	*3 weeks*	*Because no doctor*	*Facilitator not in program*	*No for way forward*	*Not always around*	*No encouragement*	*No Unity*	*No VDC trained on health*	*Not available in town*	*Political problem*	*Self centeredness of health officers*	*They are not available*	*They do not call for meeting*	*Others*	*Total*
Igbokoda	0.0	0.0	0.0	0.57	0.0	0.0	0.57	0.0	0.0	0.0	0.0	0.0	0.0	98.8	100
Ugbo	0.0	0.0	0.0	0.0	0.0	2.70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	97.30	100
Uale Nla	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.33	91.67	100
Oberawoye	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.0.0	0.0	100	100
Idi Ogba	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100	100
Odumogun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100	100
Iju	0.34	0.34	0.3	0.0	0.0	0.0	0.0	0.34	0.34	0.0	0.0	0.34	0.0	98.29	100
Araromi camp II	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100	100
Oladele and others	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100	100
Okeluse	0.0	0.0	0.0	0.0	2.02	0.9	0.0	0.0	0.0	1.01	0.0	0.0	0.0	96.97	100
Imeri	0.0	0.0	2.38	0.0	0.0	0.0	0.0	0.0	0.0	2.38	2.38	0.0	0.0	95.24	100
Total	0.13	0.13	0.13	0.13	0.26	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	98.21	100

Sources: Author's fieldwork, 2010

5.8 Supervisors' visits at VDC meetings

Table 5.8 shows the result on whether supervisors came to visit the respondents during their meetings. According to KSPA (2004), supervision from external managers provided opportunity to ensure that system-wide standards and protocols were followed at the facility level and to promote an 'organizational culture' wherein it was expected that those standards and protocols would be implemented. This implies that the more regular a supervisory visit is made on VDC meetings concerning health facilities, the more the meetings tend to deliver on its purpose of efficient health care services to the people in general.

From the table, it is obvious that those who agreed that they came on supervisory visits, 365 (57.143 percent), were higher than those who responded otherwise, 267 (42.9 percent). It could be concluded that visiting the venues of the meetings was significant in the settlements where it was claimed that they did hold VDC meetings.

Table 5.8: The nature of supervision by the VDC meetings

Area	*Supervised*	*%*	*Not Supervised*	*%*	*% Total*
Igbokoda	81	57.86	59	42.1	100.0
Ugbo	18	54.55	15	45.5	100.0
Uale Nla	7	87.5	1	45.5	100.0
Oberawoye	10	27.03	27	73.0	100.0
Idi Ogba	7	24.14	22	75.9	100.0
Odumogun	9	100.0	0	0	100.0
Iju	134	59.03	93	41	100.0
Araromi camp II	14	100.0	0	0	100.0
Oladele and others	8	88.89	1	11.1	100.0
Okeluse	40	50.0	40	50	100.0
Imeri	28	75.68	9	24.3	100.0
Total	365	57.14	267	42.9	100.0

Source: Author's fieldwork, 2010

5.9 Perception on the frequency of the supervisors' visits

In table 5.9, the data shows the frequency of the supervisory visits to VDC meetings in the settlements. Expectedly, the more frequent supervisory visits are, the more encouraged the people will be to get involved on the issues that bother on the health facilities. The frequency of supervision was found to be highest monthly with 313 (79.44 percent) respondents to that effect. A high proportion of 64 (16.24 percent) respondents indicated that the visits were quarterly, compared with 17 (4.32 percent) respondents, answering the visits were annual.

The NEEDs assessment survey in 2001 put a minimum of one month as a standard for supervisory visit. Going by the NEEDs' stipulation, it shows that in the study area of Ondo State, the supervisory visit frequency measured up to the standard requirement for frequency of supervision, given the result from more than half of the respondents. Notwithstanding, those who were visited, both quarterly and annually, would be unable to evaluate the performance of the methods of administration of health facilities; they were unlikely to be able to improve upon the health care delivery system.

Table 5.9: Perception on the Frequency of the Supervisory Visits

Area	*Monthly*	*%*	*Quarterly*	*%*	*Annually*	*%*	*Total*	*%*
Igbokoda	75	57.86	14	15.5	4	4.30	93	100
Ugbo	16	54.55	3	15.79	0	0.0	19	100
Uale Nla	5	87.5	1	14.29	1	14.29	7	100
Oberawoye	9	27.03	7	36.84	3	15.79	19	100
Idi-Ogba	6	24.14	7	41.18	4	23.53	17	100
Odumogun	9	100.0	0	0	0	0.0	9	100
Iju	121	59.04	14	10.14	3	2.174	138	100
Araromi Camp II	13	100.0	1	7.143	0	0.0	14	100
Oladele and others	6	88.89	1	14.29	0	0.0	7	100
Okeluse	37	50.0	8	17.39	1	2.174	46	100
Imeri	16	75.68	8	32.0	1	4.0	25	100
Total	313	79.44	64	16.24	17	4.32	394	100

Note: The data were derived from the author's field work in 2010.

Table 5.10 presents the data on responses on when last the supervisors visited. The result shows that the majority of the respondents who indicated visits within the standard requirement of one month were 59, 36, 14 and 125 (6.0, 3.6, 1.4 and 2.5 percents), for 1, 2, 3 and 4 weeks, respectively. Those who indicated supervisory visits in 8 weeks, 12 weeks and more than 12 weeks were 22, 5 and 25 (2.2, 0.5 and 2.5 percents), respectively. Thus, it is glaring that the latter was low. By implication, supervisory visits were frequent in the areas where VDC meetings held in the study area.

Table 5.10 Percentage respondents on when last a visit wsas made to the VDC

Area	***1 week ago***		***2 weeks ago***		***3 weeks***		***4 weeks***		***8 weeks***		***12 weeks ago***		***More than 12 weeks ago***	
	No	***%***	***No***	***%***	***No***	***%***	***No***	***%***	***No***	***%***	***No***	***%***	***No***	***%***
Igbokoda	17	7.3	10	4.3	5	2.1	36	15.5	2	0.9	0	0.0	7	3.0
Ugbo	4	8.0	2	4.0	1	2.0	10	20.0	1	2.0	1	2.0	3	6.0
Uale Nla	0	0.0	0	0.0	0	0.0	3	21.4	1	7.1	1	7.1	1	7.1
Oberawoye	2	2.7	0	0.0	0	0.0	4	5.4	0	0.0	0	0.0	1	1.4
Idi-**Ogba**	0	0.0	0	0.0	0	0.0	4	5.1	1	1.3	0	0.0	0	0.0
Odumogun	2	12.5	1	6.3	0	0.0	2	12.5	0	0.0	0	0.0	0	0.0
Iju	13	3.9	9	2.7	6	1.8	54	16.1	7	2.1	0	0.0	7	2.1
Araromi **Camp** II	1	6.7	4	26.7	0	0.0	5	33.3	1	6.7	0	0.0	1	6.7
Oladele & others	2	20.0	1	10.0	`1	10.0	1	10.0	0	0.0	0	0.0	1	10.0
Okeluse	14	12.0	4	12.0	1	0.9	4	0.9	8	6.8	3	2.6	1	0.9
Imeri	4	8.7	5	8.7	0	0.0	2	6.5	1	2.2	0	0.0	3	6.5
Total	59	6.0	36	3.6	14	1.4	125	2.5	22	2.2	5	0.5	25	2.5

Note: The data were derived from the author's field work in 2010.

5.10 Supervisors' use of checklist at VDC meetings

Table 5.11 presents the data on respondents on whether the supervisors used checklist or not at the VDC management meetings. Checklist for health system is expected to include the presence of equipment and supplies, completeness of HMIS accounts, and other process indicators, in assessing a health care facility. The checklist also requires looking at the minutes of the meeting to ensure maximum managerial delivery. From the table, 325 (54.1 percent) of the respondents agreed that checklists were used as against 276 (45.92 percent) who disagreed. The result implied that checklist was used since the people with 'Yes' answers were more. The variation across the settlements showed that supervisors used checklists more in Araromi Camp II with 14 (100.0 percent) respondents indicating so. Meanwhile, in Idi-Ogba 7 (22.6 percent) respondents indicated similarly. Non-usage of checklists was indicated by 10 (26.3 percent) respondents in Oberawoye, indicating a low knowledge of facility inventory, thereby affecting the overall planning and management of health facilities in the area.

Table 5.11 The use of supervisors' checklist

Area	*Used*	*%*	*Not used*	*%*
Igbokoda	82	55.3	67	44.97
Ugbo	19	59.4	13	40.63
Uale Nla	6	100	0	0.0
Oberawoye	10	26.3	28	73.68
Idi-**Ogba**	7	22.6	24	77.42
Odumogun	7	100	0	0.0
Iju	118	55.9	93	44.08
Araromi **Camp** II	14	100	0	0.0
Oladele and others	6	75.0	2	25.0
Okeluse	37	47.4	41	52.56
Imeri	19	70.4	8	29.63
Total	325	54.1	276	45.92

Sources: author's field work in 2010.

5.11 Routine meetings on managerial and administrative matters

Table 5.12 provides the data on respondents on whether or not they had routine meetings for managerial or administrative matters review with facility management team. Frequent reviews give room for making correction on some administrative lapses and evaluation of organisation and coordination of health facility's activities for effective delivery. From the table 5.12, it is evident that higher percentages of respondents, 577 (58.3 percent), agreed they had routine meetings. There was also variation across the settlements, in the responses. For instance, those who agreed in Araromi Camp II were 14 accounting for high percentage of 93.3; and those who agreed in Idi Ogba were 32 accounting for 40.5 percent, thus lower than in Araromi Camp. Only one respondent was (6.7 percent) indicated they had no routine meetings in Araromi Camp II. This has a serious implication for planning and management of health facilities. Other variations are presented in table 5.12.

Table 5.12: Routine meetings for reviewing managerial matters

Area	*Exist*	*%*	*Do Not Exist*	*%*
Igbokoda	137	58.8	96	41.2
Ugbo	30	60.0	20	40.0
Uale Nla	11	78.6	3	21.4
Oberawoye	35	47.3	39	52.7
Idi Ogba	32	40.5	47	59.5
Odumogun	14	87.5	2	12.5
Iju	199	59.4	136	40.6
Araromi camp II	14	93.3	1	6.7
Oladele and others	8	80.0	2	20.0
Okeluse	64	54.7	53	45.3
Imeri	33	71.7	13	28.3
Total	577	58.3	412	41.7

Source: Author's fieldwork, 2010

5.12 Maintenance of official records at the meetings

Table 5.13 presents the data on respondents on the maintenance of official records of the meetings in the study area. KSPA (2004) argued that official records of meetings held bordering on health facility management should be checked for the presence of specific items or information. This checking might be to ascertain the availability or otherwise of specific items, or checking in detail if protocols were followed at the meetings. From table 5.13, the result indicates that 478 (56.6 percent) of respondents indicated that official records of the meetings were kept and maintained, while those whose meetings had no official records were 366 (43.4 percent) respondents. Relatively, the keeping of the records of meetings ranked highest in Araromi Camp II with 13 (92.9 percent) respondents indicating so. In Idi Ogba 20 (31.3percent) respondents agreed so. On the other hand, with 44 (68.8 percent) respondents in Idi-Ogba, indicating there was no record-keeping on meetings; the settlement would be ill-affected when it came to identifying problems of health facilities and instituting changes to improve health care delivery in the area. Only one respondent indicated there was no record-keeping on meetings in Araromi Camp II, accounting for the very low percentage of 7.1. The variation in the responses on record-keeping across the settlements is presented in the table 5.13.

Table 5.13: Maintenance of the meetings' official records

Area	*Mentained*	*%*	*Not mentained*	*%*
Igbokoda	107	52.7	96	47.3
Ugbo	27	62.8	16	37.2
Uale Nla	9	75.0	3	25.0
Oberawoye	20	36.4	35	63.6
Idi Ogba	20	31.3	44	68.8
Odumogun	13	86.7	2	13.3
Iju	179	61.9	110	38.1
Araromi camp II	13	92.9	1	7.1
Oladele and others	7	77.8	2	22.2
Okeluse	52	53.1	46	49.9
Imeri	31	73.8	11	26.2
Total	478	56.6	366	43.4

Source: Author's fieldwork, 2010

5.13 Frequency of meetings on facilities' managerial and administrative matters

Table 5.14 shows the respondents on how often meetings were held to discuss the facility management and administrative matters. As earlier mentioned, the national PHC guideline for such meetings at the village committee level should be often. In overall, the result shows that 257 (40.6 percent) of the respondents agreed that meetings were held as frequently required by standard. With variation across the settlements, 13 (92.9 percent) respondents in Araromi Camp II indicated that meetings on facility management and administrative matters were held monthly, and in Uale Nla, only one (9.1 percent) respondent agreed so.

In case of respondents who indicated that VDC meetings were more often, the exact period is not calibrated in the table and the responses in this respect were relative; so, it may be very difficult to ascertain whether it was within a month or twice a year. The 124 (19.6 percent) respondents found within this category also varied across the settlements.

10.1 percent of the respondents indicated that meetings were held within 2-3 months; 6 (15.8 percent) indicated that meetings were held between 4-6 months; and 156 (24.6 percent) respondents indicated less than every 6 months. The variation is contained in table 5.14. Also, the table result generally shows that meetings on managerial activities and administrative matters were held in the study area.

Table 5.14: Frequency of meetings on facility management and administrative matters

Area	*Monthly*		*More often*		*Every 2-3 months*		*Every 4-6 months*		*Less than every 6 months not regular*		*Percentage*
	No	%	No	%	No	%	No	%	No	%	
Igbokoda	58	38.2	31	20.4	24	15.8	7	4.6	32	21.1	100.0
Ugbo	11	36.7	13	43.3	2	6.7	0	0.0	4	13.3	100.0
Uale Nla	1	9.1	5	45.5	2	18.2	0	0.0	3	27.3	100.0
Oberawoye	7	16.3	9	20.9	3	7.0	3	7.0	21	48.8	100.0
Idi Ogba	3	7.5	11	27.5	3	7.5	4	10.0	19	47.5	100.0
Odumogun	10	71.4	2	14.3	2	14.3	0	0.0	0	0.0	100.0
Iju	92	42.2	49	22.5	17	7.8	6	2.8	54	24.8	100.0
Araromi camp II	13	92.9	0	0.0	0	0.0	0	0.0	1	7.1	100.0
Oladele and others	6	75.0	0	0.0	1	12.5	1	12.5	0	0.0	100.0
Okeluse	38	58.5	1	1.5	6	9.2	5	7.7	15	23.1	100.0
Imeri	18	47.4	3	7.9	4	10.5	6	15.8	7	18.4	100.0
Total	257	40.6	124	19.6	64	10.1	32	5.1	156	24.6	100.0

Sources: Author's fieldwork, 2010

5.14 Routine meetings involving both facility staff and community members

Table 5.15 shows the result on respondents on whether or not there were any routine meetings about activities or management issues including both facility staff and community members. The frequency of meetings has significant impact on any organisational management system. From the table 5.15, 422 (45.4 percent) respondents, in the sampled settlements, agreed that routine meetings, on activities and management issues, involving facility staff and the communities held. While 111 (11.9 percent) respondents indicated that such meetings involvong the staff and community never held, 397 (42.7 percent) indicated that they did not know whether such meetings held at all. This result shows clearly that routine meetings on the activities or management issues including both facility staff and community members were not encouraging. This might make the rural people to turn to patronising private health clinics.

Table 5:15: Routine meetings on management issues involving facility staff and community members

Area	*Exist*	*%*	*Not exist*	*%*	*Don't know*	*%*	*Percentage*
Igbokoda	47.3	106	17.0	38	35.7	80	100.0
Ugbo	48.9	22	17.8	8	33.3	15	100.0
Uale Nla	66.7	8	8.3	1	25.0	3	100.0
Oberawoye	34.3	23	19.4	13	46.3	31	100.0
Idi Ogba	17.6	13	9.5	7	73.0	54	100.0
Odumogun	62.5	10	12.5	2	25.0	4	100.0
Iju	47.9	150	9.3	29	42.8	134	100.0
Araromi camp II	86.7	13	13.3	2	0.0	0	100.0
Oladele and others	70.0	7	0.0	0	30.0	3	100.0
Okeluse	33.6	37	8.2	9	58.2	64	100.0
Imeri	75.0	33	4.5	2	20.5	9	100.0
Total	45.4	422	11.9	111	42.7	397	100.0

Source: Author's fieldwork, 2010

5.15 Facility operator's feedback on key management decisions to the community

Table 5.16 presents the data on respondents on whether or not the facility operators gave feedbacks on their individual key management decisions to their community people at routine meetings. From the table, 516 (58.2 percent) of the respondents agreed that the facilities gave feedbacks on their management decisions, while 371 (41.8 percent) respondents indicated otherwise. The variation in the responses across the settlements is contained in the table 5.16. For instance, operator's feedback on key management decisions of facility was most recognised in Araromi Camp II with 14 (93.3 percent) respondents in the regard, compared with low feedback experienced in Idi-Ogba where 23 (33.8 percent) respondents indicated otherwise. Feedback on management assists planners to know the area for concentration in planning and management. If there is distortion or communication gap in terms of feedback, the facility will suffer decay,

and the people will suffer more ill-health. This was apparently the case in Idi-Ogba, where 42 (66.2 percent) of the respondents indicated feedbacks on its management decisions were not provided by facilities.

Table 5.16 Operator's feedback on facility's key management decisions at routine meetings

Area	*Exists*	*%*	*Does not exist*	*%*
Igbokoda	57.9	124	42.1	90
Ugbo	62.2	28	37.8	17
Uale Nla	63.6	7	36.4	4
Oberawoye	45.9	28	54.1	33
Idi-Ogba	33.8	23	66.2	45
Odumogun	86.7	13	13.3	2
Iju	63.0	187	37.0	110
Araromi Camp II	93.3	14	6.7	1
Oladele & others	77.8	7	22.2	2
Okeluse	45.3	48	54.7	58
Imeri	80.4	37	19.6	9
Total	58.2	516	41.8	371

Sources: Author's field work in 2010.

5.16 Channels of community feedbacks on the management decisions

Regarding channels of feedback for quality of health services in the study area, table 5.17 presents the data on respondents on avenues through which feedbacks were channelled. From the table, 48.3 percent of the respondents used suggestion box, while 1.2 percent used dialogue box. In respect of quality assurance survey, 0.9 percent of the respondents agreed to use it for feedback, compared with 0.2 percent who indicated the channel of client interview form while 1.5 percent of the respondents used dialogue as a means for feedback. A percentage of 12.8 indicated community involvement in facility's meetings while 6.2 percent indicated community representative dialogue, 24.6 percent used community dialogue. Other means of feedback were used by 2.9 percent.

In the whole, suggestion box ranked highest among the different means for feedback used by the community people, accounting for 48.3 percent. Although the rural people were predominantly illiterate, a greater percentage of them had secondary school education; hence, the respondents could express their views in writing and drop the slips in suggestion boxes. There were evidences that the elderly ones had their children write the feedbacks for them. On the utilisation of community and community dialogue as feedback channels, these ranked second highest in the varied responses in the villages. The variation of the respondents on channels of feedback is contained in table 5.17.

Table 5.17: Channels of community feedbacks on the management decisions

Area	*Suggestion box* %	*Dialogue box* %	*Quality assurance survey* %	*General complaints review* %	*Client interview form* %	*Get dialogue* %	*Involvement of community meetings* %	*Community representatives dialogue* %	*Community dialogue* %	*Others* %
Igbokoda	54.7	0.0	0.6	0.6	0.0	0.0	14.0	7.0	19.2	4.1
Ugbo	28.2	2.6	2.6	5.1	0.0	0.0	15.4	0.0	38.5	7.7
Uale Nla	33.3	0.0	0.0	0.0	0.0	0.0	22.2	0.0	44.4	0.0
Oberawoye	32.5	0.0	5.6	2.5	0.0	0.0	30.0	7.5	20.0	7.5
Idi Ogba	61.1	0.0	0.0	0.0	0.0	0.0	16.7	0.0	11.1	5.6
Odumogun	15.4	0.0	0.0	0.0	0.0	0.0	15.4	0.0	69.2	0.0
Iju	65.7	2.4	0.0	0.4	0.0	0.8	11.7	4.4	13.3	1.2
Araromi camp II	15.4	7.7	0.0	7.7	0.0	15.4	0.0	46.2	7.7	0.0
Oladele & others	33.3	0.0	0.0	0.0	0.0	11.1	0.0	22.2	22.2	11.1
Okeluse	25.0	0.0	0.0	1.5	1.5	2.9	5.9	8.8	54.4	0.0
Imeri	3.0	0.0	9.1	3.0	3.0	9.1	9.1	3.0	57.6	0.3
Total	48.3	1.2	0.9	0.2	0.2	1.5	12.8	6.2	24.6	2.9

Source: Author's fieldwork, 2010

5.17 Opportunity for opinions and complaints lodging about facilities

The data on respondents on whether or not they were allowed to give their opinions or lodge complaints about facility is captured in table 5.18. From the table, 659 (76.9 percent) of the respondents agreed that they could give their opinios or lodge complaints, while 198 (23.1 percent) indicated otherwise. Obviously, the people had the opportunity to express their minds on health care system. Yet, the result shows variation in the responses, across the settlements. 50 (83.3 percent) respondents in Oberawoye

indicated freedom to express opinions and 13 (86.7 percent) in Araromi Camp II answered similarly. In contrast, seven (58.3 percent) of the respondents in Uale Nla could express their opinions and lodge complaints, 42 (56.2 percent) of the respondents disagreed on this. Concerning management evaluation, subsidiary involvement was not encouraged in the sampled facilities of the study area. Nonetheless, cognizance is taken of the devolution of power in facility system allowing for decision-making to trickle down to the people.

Table 5.18: Opportunity for opinions and complaints lodging about facilities

Area	*Allowed*	*%*	*Not allowed*	*%*
Igbokoda	157	75.1	52	24.9
Ugbo	25	67.5	12	32.4
Uale Nla	7	58.3	5	41.7
Oberawoye	50	83.3	10	16.7
Idi-**Ogba**	32	43.8	41	56.2
Odumogun	11	73.3	4	26.7
Iju	242	84.6	44	15.4
Araromi **Camp** II	13	86.7	2	13.3
Oladele & others	7	70.0	3	30.0
Okeluse	80	81.6	18	18.4
Imeri	35	83.3	7	16.7
Total	659	76.9	198	23.1

Sources: Author's field work in 2010.

5.18 Obtained facility manager's feedback upon complaints by the community

Table 5.19 presents the data on respondents on how they obtain facility manager's feedback upon complaints by them. 230 (28.9 percent) respondents used suggestion box; 13 (1.6 percent) used counselling survey form; four (0.5 percent) used client interview form, which seemed to be relatively lower in the study area. The lower use of client interview form might be due to the technicalities involved in the filling of the form. Furthermore, 180 (22.6 percent) respondents obtained feedback from facility's managers

through official meetings with community leaders. 360 (45.2 percent) of the respondents obtained feedback from the managers through informal discussions with community leaders. Apparently, the percentage of those that utilised informal discussion with community leaders was higher than those that utilised official meetings with the leaders because, while any community member could informally approach a leader, only the people's representatives attended the official meetings. Also, 10 (1.3 percent) respondents got feedbacks from facility's managers by other means. The result of the variation across the settlements is given in table 5.19.

Table 5.19 Obtained facility manager's feedback upon complaints by the community

Area	*Suggestion box*		*Client survey form*		*Client interview form*		*Official meeting with leaders*		*Informal discussion with community leaders*		*Others*	
	No	%	No	%	No	%	No	%	No	%	No	%
Igbokoda	67	33.8	6	3.0	2	1.0	40	20.2	81	40.9	2	1.0
Ugbo	6	15.8	0	0.0	0	0.0	23	60.5	8	21.1	1	2.6
Uale Nla	2	22.2	0	0.0	1	11.1	6	66.7	0	21.1	0	2.6
Oberawoye	10	18.9	1	1.9	1	1.9	10	18.9	28	52.8	3	5.7
Idi-Ogba	22	71.0	1	3.2	0	0.0	5	16.1	2	6.5	1	3.2
Odumogun	2	16.7	0	0.0	0	0.0	1	8.3	9	75.0	0	0.0
Iju	109	37.1	5	1.7	0	0.0	43	15.3	135	45.9	0	0.0
Araromi Camp II	4	28.6	0	0.0	0	0.0	4	28.6	6	42.9	0	0.0
Oladele & others	3	33.3	0	0.0	0	0.0	3	33.3	3	33.3	0	0.0
Okeluse	4	4.1	0	0.0	0	0.0	24	24.5	67	68.4	3	3.1
Imeri	1	2.4	0	0.0	0	0.0	19	46.3	21	51.2	0	0.0
Total	230	28.9	13	1.6	4	0.5	180	22.6	360	45.2	10	1.3

Sources: Author's field work in 2010.

5.19 Community members' awareness of health programs

Table 5.20 shows the result on respondents on whether or not they were aware of any health programmes in their areas. A good percentage 746 (74.8 percent) of the respondents were aware of health programmes, accounting for the majority in the sampled areas. By inference, there was general awareness of health programs in the study area. However, 49 (62.2) of the respondents indicated non awareness in Idi Ogba. This

might owe to the location of the settlement within the study area, as Idi-Ogba was a riverine area of Ilaje LGA; indeed, it is characteristic of rural neglect. Another implication was that in spite of the implementation of health programs in the area, they were yet to yield a coordinated impact on the people. Corroborating this fact, the Basic Health in Igbo Nla area, planned to be patronized by the Ugbo community, had no single staff member at the time of the survey (see plate 3).

Table 5.20: Awareness of health programs among the people

Area	*Aware*	*%*	*Not aware*	*%*
Igbokoda	179	76.8	54	23.2
Ugbo	48	80.0	10	20.0
Uale Nla	7	50.0	7	50.0
Oberawoye	56	75.7	18	24.3
Idi-**Ogba**	36	38.0	49	62.0
Odumogun	13	81.3	3	18.8
Iju	258	77.3	76	22.7
Araromi **Camp** II	11	73.3	4	22.7
Oladele & others	9	90.0	1	10.0
Okeluse	95	81.2	22	18.8
Imeri	41	89.1	5	10.9
Total	746	74.8	249	25.2

Sources: Author's field work in 2010.

5.20 Respondents' involvement in health program initiation

Table 5.21 shows the data on the percentage of respondents who were involved in initiating health programs in the study area. The data were obtained from the 740 respondents who claimed to have the awareness of ongoing health programs. In other words, the table does not include as a variable those who claimed not have the knowledge of any health program in the area (see table 5.20). Only 74.8 percent of the sampled population were involved on this subject, hence. From the table 5.21, one (0.847 percent)

respondent, who was a national youth corp member accompanied by a medical team, was involved in initiating health programmes in the study area. Nine (1.271 percent) respondents, who were doctors, were personally involved in initiating the health programmes too. General hospitals with teams of medical personnel, who most likely had conducted an immunization program among the rural people, accounted for 0.847 percent.

To be sure, from the table result, government remained the largest health program initiator in the study area, as indicated by 301 (42.51 percent) of the respondents. In particular, certain health agencies also initiated health programs, as indicated by 267 (37.71 percent) of the respondents. In case of the agency, Niger Delta Development Commission (NDDC), particularly in the riverine area of the study, a total of 0.412 percent of the respondents indicated they had benefitted from its health programs. One (0.412 percent) respondent in Imeri settlement in the northern part of the study area indicated that health programmes had been extended to them. Often, influential individuals had lobbied with the state government and ensured state health programmes were extended to their areas.

Moreover, from the table 5.21, 15 (2.119 percent) of the respondents, nurses, had personally initiated and were involved in health programs in the study area, although these were not many. Also, community involvement in the initiation of health program was indicated by 45 (6.356 percent) respondents. It is quite strange that the communities were directly involved in health program initiation, especially evidenced in Ilaje area and demonstrating the extent to which the people had been neglected. Since there was no alternative, they had to help themselves.

UNICEF made quite minimal contribution to health care delivery in the study area. From the table, six (6.5217 percent) of the respondents indicated UNICEF initiated health programs in Okeluse. In the entire sampled area, 16 (2.99 percent) respondents indicated the impact of UNICEF in this respect. In addition, the youths were involved in the initiation of health programs, as indicated by 13 (1.8362 percent) of the enitire respondents. The variation across the settlement on involvement in health program initiation is presented in table 5.21.

Table 5.21: Respondents on initiation of health programme in the study area

Area	*Corps & medical personnel*	*Doctors*	*General hospitals*	*Government*	*Health agency*	*NDDC*	*Nurses*	*The community*	*UNICEF*	*Youth forum*	*Total %*
Igbokoda	0.565	2.26	0.0	44.07	40.68	1.695	3.39	6.215	0.0	1.129	100.0
Ugbo	2.703	2.703	0.0	29.73	10.81	35.14	8.108	8.108	0.0	2.703	100.0
Uale Nla	0.0	0.0	16.67	16.67	0.0	50.0	0.0	16.67	0.0	0.0	100.0
Oberawoye	0.0	1.852	0.0	37.04	37.04	12.96	7.407	3.704	0.0	0.0	100.0
Idi Ogba	0.03.45	0.0	0.0	31.03	41.38	6.897	0.0	17.24	0.0	0.0	100.0
Odumogun	0.0	0.0	0.0	7.143	78.57	0.0	7.143	7.143	0.0	0.0	100.0
Iju	1.421	0.0	2.058	47.33	37.45	0.412	0.0	4.527	4.1152	3.703	100.0
Araromi camp II	0.0	0.0	0.0	57.14	28.57	0.0	0.0	14.29	0.0	0.0	100.0
Oladele & others	11.11	22.22	0.0	11.11	44.44	0.0	0.0	0.0	0.0	11.11	100.0
Okeluse	0.0	0.0	0.0	44.57	45.65	0.0	1.087	2.174	6.5217	0.0	100.0
Imeri	2.5	2.5	0.0	50	22.5	0.412	0.0	20.0	0.0	0.0	100.0
Total	0.85	1.271	0.847	42.51	37.71	0.412	2.119	6.356	2.2599	1.836	100.0

Source: Author's fieldwork, 2010

5.21 Respondents' involvement in facility planning and management decisions

Table 5.22 presents the data on whether or not the respondents were involved in decision-making on planning and management of health care facilities. The decision-making roles are captured in the table as: decision-making, planning, implementation, management, finance, monitoring, and evaluation. Table 5.22 shows that the respondents that disagreed on being involved in the decision-making on planning and management of health care facilities in the study area were the majority, with the respondents being 735 (74.3 percent). Only little percentage affirmed that they were involved. The same applied to all the other options. In respect of planning of health facilities, 843 (82.2 percent) of the respondents indicated they were not involved; in terms of implementation, 859 (86.9 percent) of them answered they were not involved; and concerning management and finance, 897 and 857 (90.7 and 84.6 percentage), respectively, responded they were not involved. In addition, 828 (83.7 percent) of the respondents indicated they were not involved in monitoring and evaluation of health care delivery by facilities.

The implication of this is that in spite of the encouraging involvement of people in both the management and planning of health care facilities in earlier discussions, the present result shows a contrary result. Accounting for this difference was the fact that levels of planning and management varied among facilities. Nevertheless, people's or the community's active participation in planning and management of health facility is very crucial for the overall development of the health care system. In the study area, the people were included in Village Development Committees; however, their involvement had not made any meaningful impact on the health care delivery, as clearly shown in table 5.22. Variation across the settlement shows a high level of increase for all settlements.

Table 5.22: Involvement in health facilities' decision making

Area	*Decision making*		*Planning*		*Implementation*		*Management*		*Finance*		*Monitoring & Evaluation*		*Others*
	No	%	No	%	No	%	No	%	No	%	No	%	No %
Igbokoda	157	67.4	194	83.3	195	83.7	206	88.4	194	83.3	189	81.1	0.0
Ugbo	33	66.0	40	80.0	42	84.0	42	84.0	40	80.0	41	82.0	0.0
Uale Nla	11	78.6	13	92.9	13	92.9	14	100.0	14	100.0	12	85.7	0.0
Oberawoye	58	78.4	63	85.1	65	87.8	66	89.2	63	85.1	65	87.8	0.0
Idi Ogba	69	87.3	76	96.2	76	96.2	75	94.9	76	96.2	77	97.5	0.0
Odumogun	15	93.8	15	93.8	16	100.0	16	100.0	15	93.8	16	100.0	0.0
Iju	254	75.8	293	87.5	294	87.8	313	93.4	287	85.7	289	86.3	0.0
Araromi camp II	9	60.0	11	73.3	10	66.7	11	73.3	11	73.3	11	73.3	0.0
Oladele & others	8	80.0	8	80.0	8	80.0	8	80.0	8	80.0	8	80.0	0.0
Okeluse	95	81.2	103	88.0	108	92.3	109	93.2	103	88.0	103	80.3	0.0
Imeri	26	56.5	27	58.7	32	69.6	37	80.4	26	56.5	26	56.5	0.0
Total	735	74.3	843	85.2	859	86.9	897	90.7	857	84.6	828	83.7	0.0

Source: Author's fieldwork, 2010

5.22 Hypothesis four result on facility planning and management

The fourth hypothesis states that health status is the function of planning and management. The statistical tool used is regression model. The regression model equation is expressed thus:

$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9X_9 + b_{10}X_{10} + b_{11}X_{11} +$

$b_{12}X_{12} + b_{13}X_{13} + b_{14}X_{14} + b_{15}X_{15} + b_{16}X_{16} + b_{17}X_{17} + b_{18}X_{18} + b_{19}X_{19} + b_{20}X_{20} + b_nX_n,$

where the b is the coefficient and X is the number of independent variables or parameters.

Table 5.23: Regression table for hypothesis 4

Variables	*Standardized Coefficients*	*Probability (significant)*
Constant	15.438 ***	0.000
Involvement in Location	-0.062	0.149
Involvement in Finance	-0.005	0.867
Involvement in Sitting	0.004	0.926
Involvement in Distance	0.120 **	0.000
Availability of Equipment	0.007	0.837
Availability of Drugs	0.082 **	0.020
Emergency	-0.011	0.701
Collaboration	-0.002	0.960
Culture	0.083 **	0.012
Personnel	0.162 ***	0.000
Village development committee participation	-0.406 ***	0.000
Supervision	-0.045	0.134
Routine meeting	0.235 ***	0.000
Opinion	0.001	0.972
Suggestion box	0.001	0.968
Quality Assessment	-0.059 *	0.095
General Complaint	0.054 *	0.057
Involvement of Community	0.068 **	0.019
Community Dialogue	-0.059*	0.056
	0.077 **	0.019
F-test	15.541	0.000
R^2	0.227	

Sources: Author's fieldwork, 2010

Note: *, **, *** depicts Significance at 10%, 5% and 1% respectively.

From the results in the table, the djusted R^2 of 0.227 shows that about 22.7 percent of the variation in the health status could be accounted for by the included independent variables. Furthermore, the F-value of 15.541 ($P < 0.01$) shows that all the

parameters of planning and management were jointly significant in influencing the health status of the people in the study area. However, the levels of influence varied among the variables. Location, finance, siting, equipment, environment, emergencies, village development committee, routine meetings and opinion were not significant in the planning and management of health facilities with varying coefficients and probabilities, as the Table 6.15 shows. Meanwhile, through variation it can be deduced that some levels of significance had inverse relationships, and their existence would reduce the health status of the respondents, while their increase would aggravate illnesses in others.

For instance, distance, as part of planning, shows a level of significance at 0.0001 percent. This means that it was an important variable in planning and management of health facility. In particular, any increase in distance would affect the health status of the people, negatively, therefore, causing or aggravating illnesses. So, distance must be strictly integrated in planning and management of health facility. This result establishes the fact that physical accessibility is a major determinant of the use of hospital facilities. If modern facilities are made accessible to the people (by good planning), there is possibility that the facilities will be patronised by them appreciably (Onokevhoraye, 1999).

Also, the result on personnel as part of planning and management of health facility shows a level of significance at 0.001 percent. But the standardised coefficient is negative indicating an inverse relationship. By implication, as health personnel increases, illnesses will be reduced, and thereby, lead to increase in the health status of the people. This is because there will be enough medical personnel to attend to people's general complaints and their various illnesses, all other things being equal. As argued by Kaseje (2006), an overwhelming majority of health workers – of all categories, particularly doctors and nurses – were concentrated in urban areas, but they were in short supply in the rural areas, considering the standards of population ratios for nurse and other health workers.

Furthermore, the table 5.22 suggestion box, as a means of collecting information for proper planning and management of health facilities, shows a level of significance at 0.10 percent. By implication, suggestion box, when properly used in collecting information for planning, could facilitate good planning outcome, will reduce illnesses

and improve health status of the people in the study area. Again, the negative standadised coefficient of suggestion box as a variable meant that it had an inverse relationship with facility planning and management. Simple put, suggestion box is an effective tool in planning and management of health facilities. This was relevant when the educational status of the respondents is put into consideration, as earlier discussed in chapter four.

From the table 5.22, community involvement as one of the planning and management parameters is significant at 10.0 percent. This also indicates a negative relationship which implied that when community was involved in the planning and management of health facilities, it would help in arriving at the appropriate planning and management principles that would ultimately help in reducing health problems among the people, and thereby, raising their health status. According to Majdzadeh et al. (2009), community-based initiatives were complementary approaches to disseminate knowledge more effectively, make better use of knowledge, make the research-based solutions more relevant and sustainable, and synthesise research into evidence-based policy together with best practices for more immediate application.

Conversely, the drug, in the table, show an increase in illness, with more drugs made available in the area. The result shows that drug is very significant at 1.0 percent. This may quite be contradictory to the belief that where more drugs are supplied illness will be reduced. With these result, two basic reasons might be responsible. On the one hand, there was quite a lot of fake drugs which could be traceable to the polarisation and mixed nature of the Nigerian economy. In this case, a lot of private investors were allowed in pharmaceutical productions, thereby bringing in substandard drugs that might be destructive to health. Where such drugs were purchased and made available in health facilities, it would rather compound illnesses rather than healing them. According to Hillary and Gerry (2002), one of the most striking feautures of marketisation in the health sector was the rapid increase in the number and variety of the sources of drugs. Therefore, with counterfeit and expired drugs accounting for a varying proportion of purchaces drug quality problems continue to abound.

Many studies have documented the impact that counterfeit drugs can have on patients' health, as much as they undermine the health care system. Reggi (2006) made a case of a counterfeit iron preparation that had killed pregnant women in Argentina in the

two previous years. In addition, it was not impossible that most health care providers divert the drugs meant for the public to private stores, thereby compounding access problem. In this case, while problems of illness increase, the record might show that drugs supply was on the increase in the area.

On the other hand, when there exists a particular disease or illness prevalent in an area, planning effort will be concentrated in the area. So, where there is illness prevalence, drug supply will also increase. This readily applies to HIV/AIDS in Africa today. The bulk of international finance on AIDS is concentrated in Africa, yet, AIDS is prevalent. This means that drug is an essential planning and management consideration for effective health impact or outcome.

Where an illness exists, collaboration among stakeholders will be more, raising their concern on how the problem could be solved. In table 6.13, collaboration shows a high significance at 0.05 percent. Similarly, where there is collaboration, cultural consideration will be vital in the planning process; culture may have effect on planning and management of health facilities. While all these activities are going on, supervision will be very highly involved to ensure that the spread of illness is curbed. Accordingly, thus, the result shows that culture is very significant at 0.1 percent, while supervision is also significant at 0.1 percent. In addition, quality assessment is also part of planning variable and is significant at 10.0 percent. This means that in the study area, quality assessment would affect the health status of the people.

Where quality assessment increases, growth of illness among the people is very high, which necessitates checking the health status of the people from time to time. Simply, quality assessment of medical treatment is a crucial variable to be considered in planning and management of facilities. Likewise, where there are no illness no form of health complaint will be found at all; hence, quality assessment will be deemed unnecessary, and this may ultimately affect the people's health status negatively. This is why the result shows a level of significance at 0.5 percent. Also, on community dialogue, it can be drawn from the table that, where there was increase in community dialogue, there was a problem with the health status of the people. So, dialogue would be necessitated among the people on how to go about the illness. This is further confirmed with collaboration as a variable in planning and management of facilities.

In general, the result shows that health status of the people is directly affected by the planning and management of health care facilities of the area. WHO (1998) submitted that weak planning and management systems in the health sector had possibly been the result of series of factors such as lack of proper human resources development; inadequate understanding of public health; poor functional linkages among public health programs and ministries of health; centralised decision-making system and weak capacity at the center; centralised decision-making and weak implementation at the periphery; weak mobilization of internal resources; and limited capacities to direct internal inputs towards the needed health development.

5.23 The result of the logistic regression

The regression 5.24b table further confirms the result earlier given in this section on multiple regressions, the coefficient table of logistic regression of the result of the analysis. Apart from contacting the people in the siting of facilities, availability of basic equipment which is part of planning parameters, others are significant in a way, in influencing the health of an individual. The overall classification percentage shows how strong is strong as a tool in logistic to determine the strength of the model. This means that all other factors are very important in the determination of effective health care delivery in the study area. The result is further confirmed in the appendix …..

Table 5. 24: Logistics Regression Classification Function Coefficient Table

	Malaria	*Water Borne Disease*	*Cough*	*Sexually transmitted diseases*	*Cold*	*Diarrhea/ Dysentery*	*Catarrh*	*Typhoid*	*Headache*	*Stomach pain*	*Guinea worm*	*Summary of the result*
Location	√	--	√	-	√	-	-	√	√	√	-	6
Finance	-	-	-	-	-	-	-	√	-	-	-	1
Sitting	-	-	-	-	-	-	-	-	-	-	-	0
Distance	-	√	-	-	√	-	-	√	√	-	√	5
Equipment	-	-	-	-	-	-	-	-	-	-	-	0
Drugs	-	√	-	-	-	√	-	√	√	√	-	5
Emergency	-	-	-	-	-	-	-	-	-	-	-	0
Collaboration	-	-	-	-	√	√	√	-	-	-	√	4
Culture	-	-	√	-	√	√	√	√	√	√	-	7
Environment	-	-	-	√	-	-	-	-	-	-	-	1
Personnel	√	-	√	-	√	√	√	√	√	√	-	8
V D C participation	-	-	-	-	-	-	-	-	-	-	-	0
Supervision	√	-	√-	-	√	√	√	√	√	√	-	8
Routine meeting	-	-	-	-	-	-	-	-	-	-	-	0
Opinion	-	-		-		-	-	-	-	-	-	0
Suggestion box	-	-	√	-	-	-	-	√	√	-	-	3
Quality Assessment	-	-	-	-	-	√	-	-	-	-	-	1
General Complaint	-	-	√	-	-	-	-	√	-	-	-	2
Involvement of Community	√	-	-	-	√	-	-	-	-	-	-	2
Community Dialogue	√	-	-	-	-	-	-	-	-	-	-	1
Overall Classification %	69.9 %	97.6 %	82.0 %	98.2 %	77.0 %	90.1 %	81.0 %	86.2 %	79.3 %	86.8 %	99.0 %	

Source: Author's fieldwork, 2010

Key: √ = significant, - = Not significant

5.24 The profile of health status index

Table 5.25 shows the result of respondents on the cases of illness signifying the health status index of the people, as reported at health facilities in the last two weeks before the interview. From the table, almost half of the respondents, 414 (41.9 percent), agreed to have reported malaria as their illness in the last two weeks (29th July to August 11,2010). This was against 575 (58.1 percent) who did not report within the same time length. This implies that a good percentage of the people were suffering from malaria. The variation across the settlements shows clearly that Araromi Camp II and Oladele and others were victims of this, because of the high percentage (80 and 70 percents) accrued to them, respectively. This might not be unconnected with the fact that the health facilities were located far away from the respondents' locations. During the FGD session Mr Yahya Luqman stated thus:

> *The day my wife was laboring, we are unable to get a vehicle. There is no vehicle here. We made use of motorcycle. To use motorcycle to convey someone that is laboring from here to Iju, then back to Akure if not for a divine intervention.*

In the case of water-borne diseases, variation across the settlements shows that apart from Uale Nla and Imeri which accounted for 7.1 and 6.5 percents, respectively, the situation in other area are extremely low (about 1.5 Iju). Other settlements did not have such cases at all. These included Oberawoye, Odumogun, Araromi Camp II, Oladele and others and Okeluse ,where 0.0 percent responses in this respect were observed. Generally, the 2.4 percent suffering from cough as against 97.6, who did not cough, is also shown in the table 5.25. Those who reported the cases of cough in the last two weeks accounted for 18.0 percent of the entire respondents. The variation across the study area shows that Igbokoda and Oladele and others have a high incidence of reported cases of cough (42.0 and 40.0 percents, respectively) with no case at all in Odumogun. Since, Odumogun was a riverine area, cough was not prevalent there; dust was one of the major causes of cough. The results for the other settlements are presented in table 5.25.

Another reported illness in the past two weeks by the respondents in the study area was Sexually Transmitted Diseases (STDs). In general, 1.8 percent, as against 98.2 percent, of the respondents agreed to have reported this at the health facilities. In Imeri, Ugbo and Igbokoda, 4.3, 4.0 and 3.4 percents, respectively, indicated across the settlements cases of STDs. The reason for the low response on STDs in general was that it was very common among the rural dwellers to see STDs as a stigma. Therefore, they might find it difficult to report such cases at the nearest health facilities.

With regards to cold sickness, generally, 23 percent of the respondents indicated to have reported the case of cold to hospitals while 77 percent did not. Although, going by the variation in the study area as shown in the table, it was noted that 48, 40 and 33.3 percents reported cases of cold sickness in Ugbo, Oladele and others, and Igbokoda, respectively. The reason for this could be that cold was not regarded as a serious ailment; as such it should not be reported. In other words, cold could be taken care of locally, (traditional means or self-medication) given that the place was rural. The result also implies that some other people were in the study area who were aware of the importance of orthodox medicine, therefore, would report the case. The number of reported cases was significant in the areas mentioned above. The result about the other settlements is contained in Table 5.25.

Diarrhoea or Dysentery is very prevalent in the rural areas because of poor hygiene. The table 5.25 shows the result of the reported cases of this illness in the study areas for the past two weeks as at the time of the study. About 9.9 percent of the cases were reported while 90.1 percent of the respondents did not have it. There was a considerable degree of variation across the settlements. Ugbo and Oladele and Others were higher compared to others, accounting for 28 and 10 percents, respectively. The other result is further presented in the table.

Also reflected in the table 5.25 are cases of catarrh. Catarrh accounted for 19.2 percent of reported cases of illness among the entire respondents. Meanwhile, the result varied within the study areas. While there were 60 and 40 percent respondents who indicated catarrh cases in Oladele and others and Odumogun, respectively, others did not indicate any case of the illness. This implies that catarrh was a serious ailment in Oladele and others, and some of the areas as depicted in the table. Settlements where catarrh was

not reported might, however, have cases of the illness. And the fact that such were not reported could be as a result of poverty.

Typhoid is another ailment, reported cases of which are shown in Table 5.25. While 13.8 percent reported their cases, 86.2 failed to do so. Oladele and others and Ugbo accounted for more in the entire study areas compared to others (40 and 32 percents, respectively). The least reported cases were seen in Idi-Ogba and Odumogun, accounting for 6.3 percent each.

The table further shows the result on reported cases of headache in the study areas. Ugbo and Oladele and others experienced more than others. Although there seems to be more reported cases of headache in the study area, from the table, the two settlements accounted for 46.0 and 40 percent, respectively. The least reported cases were found in Idi-Ogba with 5.1 percent. The reason for the headache might be undue exposure to sun while working in farms, since the place was a rural area and people there are predominantly farmers.

Finally, the result on stomach pain and guinea worm reported cases reflects in Table 5.25. In general, on the cases of stomach pain, about 13.2 percent reported their cases while 86.2 did not. The variation across the study area shows that 50 percent of the people in Oladele and others reported the cases as against 50 percent that did not report. 30 percent in Ugbo, but no case was reported in Odumogun. Guinea worm seems not to be common in the study area, generally. Although reported cases of the disease were indicated in Igbokoda, Ugbo, Imeri and Iju, accounting for 2.6, 4.0, 2.2 and 0.3 percents, respectively, other places in the study area did not report their cases. This latter group accounted for 3.2 percent of the entire respondents, which is quite negligible.

In all, it could be said that Oladele and others and Ugbo ranked high in terms of the patronage of the heatlth facilities and in reporting their cases of illnesses. This showed they gave more attention to modern health facilities than the other communities. It could also be said that the low percentage of the respondents on the report of some ailments does not mean they did not experience such. Such unreported cases may imply that the people either ignored orthodox health facilities or resort to self-medication.

Table 5.25: The Reported cases of illness in the past two weeks (Health Status Index)

AREA	*Malaria*		*Water Borne Disease*		*Cough*		*Sexually transmitted diseases*		*Cold*		*Diarrhea/ Dysentery*		*Catarrh*		*Typhoid*		*Headache*		*Stomach pain*		*Guinea worm*	
	pop	%	Pop	%	Pop	%	Pop	%	Pop	%	pop	%	Pop	%	pop	%	Pop	%	Pop	%	pop	%
Igbokoda	126	30.43	11	2.66	57	32.02	8	44.44	77	33.9	31	31.63	59	31.05	43	31.62	61	29.76	39	29.77	6	60.0
Ugbo	26	6.28	2	8.33	21	11.8	2	11.11	24	10.56	14	14.28	20	10.53	16	11.77	23	11.22	15	11.45	2	20.0
Uale Nla	7	1.69	1	40.0	3	1.69	0	0.00	4	1.76	1	0.02	5	2.63	4	2.49	1	0.49	3	2.29	0	0.00
Oberawoye	24	5.8	0	0.00	12	6.74	0	0.00	15	6.61	10	10.20	9	4.74	13	9.56	15	7.32	11	8.40	0	0.00
Idi Ogba	14	3.38	2	8.33	5	2.81	1	5.56	7	3.08	3	3.06	5	2.63	5	3.68	4	1.95	3	2.29	0	0.00
Odumogun	6	1.45	0	0.00	0	0.00	0	0.00	2		1	1.02	0	0.00	1	0.74	1	0.49	0	0.00	0	0.00
Iju	124	30.05	5	20.83	48	27.0	1	5.56	58	25.55	19	19.39	50	26.32	24	17.65	53	25.85	31	23.66	1	10.0
Araromi camp II	12	2.09	0	0.00	4	2.25	0	0.00	4	1.76	0	0.00	3	1.58	2	1.47	3	1.46	4	3.05	0	0.00
Oladele & others	7	1.69	0	0.0	4	2.25	0	0.00	4	1.76	1	1.02	6	3.16	4	2.94	4	1.95	5	3.82	0	0.00
Okeluse	46	11.11	0	0.00	14	7.87	3	16.67	23	10.13	10	10.20	22	11.11	14	10.29	26	12.68	13	9.92	0	0.00
Imeri	22	5.31	3	12.5	10	5.62	2	11.11	9	3.97	8	8.16	11	5.79	10	7.35	14	6.83	7	5.34	1	10.00
Total	414	100.0	24	100.0	178	100.0	18	100.0	277	100.0	98	100.0	190	100.0	136	100.0	205	100.0	131	100.0	10	100.0

Sources:Author's fieldwork, 2010

For hypothesis 2, which states that there is no significant relationship between the health facility type and the health status of the people, regression model was used which is expressed thus:

$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_nX_n$,

where the Y is measured by the health status (illness in the past 2 weeks) and X variables as:

X_1 = hospital

X_2 = Health

X_3 = Private Clinic

X_4 = Maternity

X_5 = Dispensary

X_6 = Laboratory.

Table 5.25: Regression table for hypothesis 2

Variables	*Standard coefficients*	*Probability*
Constant	8.880	-
Hospital	-0.017	0.000
Health	0.138	0.000
Private clinic	0.069	0.139
Maternity	-0.025	0.502
Dispensary	0.054	0.084
Laboratory	0.018	0.550
F-test	5.282	0.000
-R^2	0.025	

From the result on Table 5.25, adjusted R^2 of 0.025 shows that the availability of all facilities could only explain about 2.5 percent of illness (health status). Also, the F-value of 5.282 ($P<0.05$) shows that all the facilities were jointly significant in influencing health status. The result of the multiple regression analysis on table 5.26 shows that only health was significant in influencing health status of the people. However, the influence was such that it raised illnesses or worsened health status. By

implication, people who patronised health facilities did not have adequate treatment. This could be attributed to inadequate equipment, staff and drugs, and might also be as a result of poor funding of public health facilities. This claim is established by the result earlier shown in chapters 4 and 5, and to be shown later in 6 of this study. According to Magmus (2008), the problems of facilities and personnel affected most primary health care services, particularly, the local government-owned primary health facilities.

Nevertheless, hospital shows a level of negatively significant influence on the health status of the people. This implies that people would have adequate health care by patronising the hospitals which were more equipped and staffed than health care facilities.

5.25 Self-medication and unorthodox medicare in the study area

Shown in table 5.27a is the result of the existence of unothodox medicare and that of self-medication in the study area. From the table, self-medication is rated higher, accounting for 49.2 percent when compared to unorthodox (alternative medicare) accounting for 11.1 percent of the respondents. Orthodox medicare was the highest in the study area which accounted for 49.7 percent. The variation across the settlement is shown in the table. The result in table 5.27 further confirms the earlier result on the awareness of orthodox medicine among people in the area. Meanwhile, the choice of the respondents on the traditonal medicine and that of self-medication revealed that the majority preferred traditional medicine, accounting for 938 (94.8 percent), while 795 (80.5 percent) did not see self-medication as choice whenever they were sick. It could be said that the preference for traditional medicine could be as a result of low financial status of the people, in which the poor patronage affected the health of the users, as traditional medicine did not provide for requsite modern equipment to obviate the prevailing sicknesses among the people. These, eventually, led to a situation of cyclic poverty and deteriorating health status with the worsening clinical cases.

Table 5.27a: Respondents'awareness on self medication and unothodox (alternative medicare)

Area	*Traditional medicine*				*Self Medication*			
	Choice		Not a choice		Choice		Not a Choice	
	No	%	No	%	No	%	No	%
Igbokoda	225	96.6	8	3.4	48	20.6	185	79.4
Ugbo	50	100.0	0	0.0	19	38.0	31	62.0
Uale Nla	14	100.0	0	0.0	4	28.6	10	71.4
Oberawoye	66	89.2	8	10.8	30	40.5	44	59.5
Idi Ogba	77	97.5	2	2.5	17	21.5	62	78.5
Odumogun	15	93.8	1	6.3	5	31.3	11	68.8
Iju	309	92.2	26	7.8	39	11.6	296	88.4
Araromi camp II	15	100.0	0	0.0	2	13.3	13	86.7
Oladele & others	10	100.0	0	0.0	2	20.0	8	8.0
Okeluse	112	95.7	5	4.3	16	13.7	101	86.3
Imeri	45	97.8	1	2.2	11	32.9	35	76.1
Total	938	94.8	51	5.2	193	19.5	796	80.5

Sources: Author's fieldwork, 2010

5.26 The pattern of the health status of the people

The result on table 5.27b is on the pattern of health status of the people in the study area of Ondo State, based on self-reported rating. This took into cognizance binary variables like good or bad. These respondents who were considered in this regard were the respondents that patronised the health care facilities. These were 817 out of the sampled population. From the result, 684 (83.7 percent) agreed that their health was good, while 133 (16.3 percent) agreed that their health was poor. The variation across the settlement is presented in the table 5. 28. Meanwhile, the health status as rated by respondents does not necessarily show that service delivery were adequate. Given the result earlier mentioned that people were on self-medication. This would have contributed, significantly, to the improvement of the people's health status. Settlements like Igbokoda, Idi-Ogba, Iju and Imeri had nearly high records of good health statuses compared to others.

The gender distribution of the respondents on the health status, across the study area, is further shown in table 5.27c. A good number of 332 (81.4 percent) of the males' health status was good, while 76 (18.6 percent) were poor. 86.1 percent of

the females' health status was good, while 57 (13.9 percent) of the females' were poor. Meanwhile, Table 4.27d displays the result in respect of age distribution of the people on their health status. In this regard, for respondents between 18-45 years 483 (83.0 percent) indicated good health status, while 99 (17 percent) indicated bad. For those between 46-60 years, 148 (84.6 percent) indicated good, as against 27 (15.4 percent) that indicated poor health status. For those above 60 years of age, 53 (88.3 percent) had good, compared to those 133 (16.3 percent) that had poor health status.

Table 5.27b: Pattern of health status of the respondent

	Good		***Bad***	
Location	**No**	**%**	**No**	**%**
Igbokoda	177	88.1	24	11.9
Legbe	20	62.5	12	37.5
Uale Nla	5	50.0	5	50.0
Oberawoye	53	85.5	9	14.5
Idi-Ogba	63	90.0	7	10.0
Odunogun	7	53.8	6	46.2
Iju	245	88.1	33	11.9
Araromi Camp II	7	63.6	4	36.4
Oladele and others	7	87.5	1	12.5
Okeluse	65	72.2	25	27.8
Imeri	35	83.3	7	16.7
Total	684	83.7	133	16.3

Author's Field Work 2010

Table 5.29 : Health status and gender

	Good		***Bad***	
Gender	No.	%	No.	%
Male	332	81.4	76	18.6
Female	352	86.1	57	13.9
Total	684	83.7	133	16.3

Sources: Author's field work in 2010.

5.27d: Health status and age

	Good		*Bad*	
Age	No	%	No	%
16-45	483	83.0	99	17.0
46-60	148	84.6	27	15.4
Above 60	53	88.3	7	11.7
	684	83.7	133	16.3

Sources: Author's field work in 2010.

5.27 Percieved factors which make facility difficult to access in the area

Table 5.31 captures the respondents on which of the mentioned factors were responsible for making facilities inaccessible in their areas. The question was based on the perceived problems associated with health care delivery, and this table gives a number of options available to the respondents. Each respondent was given the freedom to select as many reasons as were applicable to him/her. The reason was that, if any reason was not captured in the previous tables, it can be addressed in this latter table. Meanwhile, there are some of the reasons/options that are similar, as evident in table 5.31.

The hours of operation, if shorter than nessesary, might affect the patronage of health facilities in the rural areas, thereby posing health problems, particularly during emergency. In the table, those who agreed that the hours of operation posed health problems were 190 (19.2 percent). Staff inadequacy accounted for 980 (48.5 percent) of the respondents. This was the highest among the factors. It varied in all the settlements. For instance, there was staff inadequacy in Araromi Camp II, Odumogun, Okeluse and Ugbo, accounting for 13, 11, 75 and 29 (86.7, 68.8, 64.1 and 58.0 percents), respectively. Oladele & others recorded an outright lack of staff as a problem.

Another factor which posed difficulty in accessing health care facilities in the study area was infrastructure. Facilities must have adequate supporting infrastructure and available resources to support quality counselling and examination of clients. They should also have the equipment and supplies needed to provide each family method they offer (KSPA, 2003). Infrastructure as a problem in the study area accounted for 272 (27.5 percent) of the respondents. Notwithstanding, the problem

was relatively higher in Odumogun, accounting for 68.8 percent and low in Igbokoda with 60 (25.8 percent) (see plate 4.1).

Incompetence on the part of medical staff is very dangerous to human health. According to FMH (2006), Nigeria's health indices ranked among the worst in the world. One of the reasons is poor access to quality health care services, which is caused by staff incompetence. (Magnus, 2008). Table 5.31 reveals a low percentage of the respondents, 20.7% (205), who indicated incompetence as a threat to health care delivery. A relative percentage of 40.0 (6) were recorded in favour of Araromi Camp II and Oladele and others, compared to 4 (5.1 percent) in Idi-Ogba.

Bad road network can pose a serious challenge to health, moreover, as another variable in table 5.31. The result of the survey shows that the perceived factor accounted for 244 (24.7 percent) of the respondents. This supports the result contained in table 5.31. The cost of transport is another factor which can militate against the patronage of health facilities. It accounted for 10.2% of the respondents in the study.

Long hours of waiting can affect the patronage of health facilities negatively. This accounted for 17.3% (171) of the respondents, and more respondents indicated likewise in Araromi Camp II and Oladele and others, which accounted for 8 and 5 respondent (53.3 and 50.percent), respectively. This is followed by the remote location of facility measured in distance. The farther the facility, all things being equal, the more discouraging it was for people to patronise health care facilities.This result confirms the FGD result from Akure North by Mr Hassan Yisa who stated:

> *Yes, there is one important thing I have in mind that I know we really lack. The day my wife was about to deliver her baby, around 12:00am, I woke up to take her to the hospital in Iju. So, as we reach there, we didn't even see any doctor around. We only met two nurses; even they reluctantly opened the door for us before we could enter. And both of them has slept. The person that came outside when we knocked was the one that told us or referred us to take her to Akure that they don't have a doctor…. I took her to Akure around that time on a motorcycle. It was around past 2am that she delivered the baby at general hospital. We firstly took her to the town directly so what I have at the back of my mind is that the government should please try as much as possible to help us.*

Table 5.28 reveals that a low percentage of 5.5 (54) consider remoteness as a factor. This is rather low. Although, relatively, while Igbokoda accounted for 30 (12.9 percent) low, remoteness is not regarded as a factor militating against Uale Nla, Araromi camp II, Oladele & others and Imeri which accounted for 0.0 percent, respectively.

In respect of accommodation of staff, it accounted for low percentage of (135) 13.7, while those who agreed that none of the factors were responsible for difficulty in the accessibility to health facilities were low, generally. But the variation across the settlements is shown in the same table. Others (including the irregularity of staff at work) accounted for two (7.2 percent) with virtually all the settlements' variation shown in the same table.

Plate 5: 3 Abandoned general hospitals in Igbokoda (Ilaje LGA)

Note: The data were derived from the author's field work in 2010.

Table 5.28: Percieved factors of inaccessibility to health care facilities in the study area

Area	*Hours of operation*		*lack of Staff*		*Infrastructure*		*Incompetence*		*Bad road*		*Transport cost*		*Long hours of waiting*		*Remote location of facility*		*Accommodation of staff*		*None*		*Others*	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
Igbokoda	47	20.2	116	49.8	60	25.8	52	22.3	80	34.3	34	14.6	61	26.2	30	12.9	33	14.2	39	16.7	1	0.4
Ugbo	9	18.0	29	58.0	17	34.0	16	32.0	25	50.0	10	20.0	6	12.0	2	4.0	3	6.0	7	14.0	0	0.0
Uale Nla	2	14.3	8	57.1	7	50.0	4	28.6	8	57.1	4	28.6	2	14.3	0	0.0	1	7.1	0	0.0	0	0.0
Oberawoye	20	27.0	27	36.5	24	32.4	11	14.9	32	43.2	8	10.8	14	18.9	1	1.4	7	9.5	0	0.0	0	0.0
Idi Ogba	4	5.1	8	10.1	28	35.4	4	5.1	26	32.9	7	8.9	5	6.3	4	5.1	13	16.5	41	51.9	0	0.0
Odumogun	3	18.8	11	68.8	11	68.8	6	37.5	13	81.3	7	43.8	5	31.3	1	6.3	3	18.8	1	6.3	0	0.0
Iju	62	18.5	158	47.2	40	11.9	59	17.6	18	5.4	16	4.8	6	16.7	13	3.9	57	17.0	104	31.0	1	0.3
Araromi Camp II	7	46.7	13	86.7	3	20	6	40	8	53.3	6	40	8	53.3	0	0	0	0	5	33.3	0	0
Oladele & others	7	70.0	10	100.0	6	60	4	40	6	60	4	40	5	50	0	0.0	0	0.0	3	30.0	0	0.0
Okeluse	23	19.7	75	64.1	56	47.9	39	33.3	16	13.7	2	1.7	6	5.1	3	2.6	13	11.1	20	17.1	0	0.0
Imeri	6	13.0	25	54.3	20	43.5	4	8.7	12	26.1	3	6.5	3	6.5	0	0.0	5	10.9	11	23.9	0	0.0
Total	190	19.2	480	48.5	272	27.5	205	20.7	244	24.7	10`1	10.2	171	17.3	54	5.5	135	13.7	231	23.4	2	7.2

Sources: Author's fieldwork, 2010

In table 5.29, the problems associated with health care delivery are identified. Percentage of those who agreed that there were problems with health care delivery in the study area amounted to 19.5 percent. From this percentage, some problems were identified: bad services, distance, inadequate drug facility and modern equipment, inadequate staff specialists, and lack of accessibility to good road network. In all, inadequate drug facilities and modern equipments ranked lowest among the indicated problems accounting for 36 (3.6 percent) of the respondents. The variation across the settlements can be seen in table 5.32. Based on the foregoing, the choice of responsiveness as one of the fundamental parameters is deficient, giving that the choice of responding or being responsive with rapidity in bringing a positive change to the health system is not adequate.

Table 5.29 Respondents' list of problems associated with health care delivery

Area	*Bad service*		*Distance*		*Inadequate drug facility and modern equipment*		*Inadequate staff/specialists*		*No access to good road*		*NA*	
	No	%	No	%	No	%	No	%	No	%	No	%
Igbokoda	17	7.3	1	0.4	13	5.6	12	5.2	5	2.1	185	79.4
Ugbo	4	8.0	0	0.0	8	16.0	6	12.0	1	2.0	31	62.0
Uale Nla	0	0.0	2	14.3	0	0.0	2	14.3	0	0.0	10	71.4
Oberawoye	15	20.3	0	0.0	6	8.1	5	6.8	4	5.4	44	59.5
Idi Ogba	12	15.2	1	1.3	1	1.3	2	2.5	1	1.3	62	78.5
Odumogun	3	18.8	0	0.0	0	0.0	0	0.0	2	12.5	11	68.8
Iju	5	1.5	0	0.0	27	8.1	4	1.2	3	0.9	296	88.4
Araromi Camp II	1	6.7	0	0.0	1	6.7	0	0.0	0	0.0	13	86.7
Oladele and others	0	0.0	0	0.0	1	10.0	1	10.0	0	0.0	8	80.0
Okeluse	0	0.0	0	0.0	14	12.0	2	1.7	0	0.0	101	86.3
Imeri	1	2.2	0	0.0	6	13.0	2	4.3	2	4.3	35	76.1
Total	58	5.9	4	0.4	77	7.8	36	3.6	18	1.8	796	80.5

Source: Author's fieldwork, 2010

5.28 Solutions to perceived problems with health care delivery

Table 5.30 presents suggestions on solving the perceived problems associated with health care delivery, viz-a-viz heath facilities in the study area. The supply of medical equipment ranked highest among other suggestions in the table. Supply of medical equipment accounted for 604 (61.1 percent) of the entire respondents. The need for equipment is very crucial in health care delivery. The case of inadequate equipment was more pronounced in Araromi Camp II and Oladele and others where medical equipment were lacking in the existing health facilities, compared to the less 35.4% (28) of respondents in Idi-Ogba.There should therefore the need for modern medical equipment.

Supply of equipment is followed by recruitment of more staff, indicated by 477 (48.2 percent) of the respondents. Although variation across the settlements shows that Araromi Camp II and Oladele & others had pressing need of staff recruitment, indicated by 10 (100.0 percent) of the respondents, compared to Idi-Ogba where they were low, 21.5 percent (17). Also, those who indicated that members of staff should live very close to the facility accounted for 291 (29.4 percent). This option was relatively high in Araromi Camp II with 15 (100.0 percent) respondents and low in Idi-Ogba, having 7 (8.9 percent) respondents in the regard. This implies that the people were in dire need of medical personnel; and the closer they lived to facilities, the easier they could receive medicare whenever there was an emergency, even at odd hours. It also implies that most people, probably, depended on the operational system of 'visiting and going'; so, they needed resident doctors.

Road rehabilitation as one of the suggested solutions to the existing problems indicated by 259 (26.2 percent) of the respondents, as against giving incentives to the doctors so as to encourage them to stay, indicated by 230 (23.3 percent). Although the variation across the settlements reveals that Oladele and others required more of road rehabilitation accounting for seven (70.0 percent) respondents, while incentives were needed more in Odumogun as indicated by 11 (68.8 percent). This result shows that apart from the fact that the people needed all the suggested solutions to meet their health needs, greater awareness of the modern health care among them was required.

Table 5.30: Respondents' suggested solution to the problem.

Area	*Supply equipment*		*Recruitment of staff*		*Live close to the facility*		*Rehabilitation of road*		*Given incentives*		*Others*	
	No	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**
Igbokoda	145	62.2	114	48.9	62	26.6	76	32.6	66	28.3	0	0.0
Ugbo	35	70.0	28	56.0	17	34.0	28	56.0	9	18.0	1	2.0
Uale Nla	13	92.9	7	50.0	4	28.6	8	57.1	4	28.6	0	0.0
Oberawoye	50	67.6	42	56.8	19	25.7	39	52.7	15	20.3	0	0.0
Idi Ogba	28	35.4	17	21.5	7	8.9	22	27.8	1	1.3	1	1.3
Odumogun	15	93.8	11	68.8	11	68.8	7	43.8	11	68.8	0	0.0
Iju	174	51.9	138	41.2	87	26.0	21	6.3	75	22.4	1	0.3
Araromi Camp II	15	100.0	15	100.0	15	100.0	7	46.7	10	66.7	0	0.0
Oladele & others	10	100.0	10	100.0	8	80.0	7	70.0	3	30.0	0	0.0
Okeluse	92	78.6	73	62.4	41	35.0	32	27.4	27	23.1	0	0.0
Imeri	27	58.7	22	47.8	20	43.5	12	26.1	9	19.6	0	0.0
Total	604	61.1	447	48.2	291	29.4	259	26.2	230	23.3	3	0.3

Source: Author's fieldwork, 2010
*More than one problem sought

5.29 Measurement of the functionality of health facilities

Table 5.34 captures the respondents' result on the variables used to measure the functionality of the health facilities. Most of these variables had been mentioned in the people's perception on the planning of health care facilities, and they include: staff adequacy, response to emergency, attitude of staff to patients, the cost of service, availability of modern equipment, availability of drugs, design capacity/number of bed space, community involvement, and effective management. The result of each of this is given in the table.

In respect of staff adequacy, 708 (71.6 percent) of the respondents indicated that there was acute shortage of staff. On the issue of response to emergency 199 (79.9 percent) indicated high response to emergency. Only 166 (16.8 percent) of the respondents rated the staff "hostile", implying cordial staff-patients relationship in the study area. In terms of the cost of services, only 189 (19.1 percent) of the respondents identified cost of services as accounting for their relunctance to patronise health facilities. A total of 709 (71.1 percent) of the respondents judged the existing

equipment inadequate. This was corroborated in the FGD in Imeri, where Mr Abiodun Alade stated thus:

> They are many. For instance, look at the maternity here. Yes, there is no bed there, no drugs, no chair, no bench, no fan. They don't take care of it at all. We complained several times but they keep on promising that they will do it.

Availability of drugs was a major issue, no doubt. About 717 (72.5 percent) of the respondents claimed there was unavailability of drugs. Only 548 (55.4 percent) of the designed capacity of bed ratio had been attained. More than a half of the respondents agreed that they were involved as against 427 (43.2 percent) that claimed non-involvement in ensuring the functionality of the health facilities. On the account of management, 470 (47.5 percent) of the people claimed they were not involved.

Table 5.31: Factors for measuring the functionality of health care facilities in the study area

Area	*Staff adequacy*		*Response to emergency*		*Attitude of staff to patients*		*Cost of service*		*Availability of modern equipment*		*Availability of drugs*		***Designed** capacity/number of bed spaces for in-patients*		*Community involvement*		*Effective management*	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
Igbokoda	163	70.0	61	26.2	53	22.7	69	29.6	145	62.2	162	69.5	126	54.1	98	42.1	112	48.1
Ugbo	37	74.0	9	18.0	19	38.0	15	30.0	42	84.0	37	74.0	25	50.0	26	52.0	28	56.0
Uale Nla	12	85.7	6	42.9	2	14.3	3	21.4	10	71.4	11	78.6	7	50.0	5	35.7	6	42.9
Oberawoye	58	78.4	17	23.0	9	12.2	14	18.9	61	82.4	60	81.1	54	73.0	47	63.5	54	73.0
Idi-Ogba	59	74.7	11	13.9	8	10.1	20	25.3	60	75.9	60	75.9	61	77.2	53	67.1	56	70.9
Odumogun	12	75.0	1	6.3	1	6.3	6	37.5	12	75.0	12	75.0	13	81.3	1	6.3	10	62.5
Iju	209	62.4	61	18.2	52	15.5	42	12.5	212	63.3	219	65.4	149	44.5	138	41.2	127	37.9
Araromi Camp II	11	73.3	0	0.0	2	13.3	4	26.7	11	73.3	12	80.0	5	33.3	2	13.3	2	13.3
Oladele & others	9	90.0	1	10.0	3	30.0	5	50.0	9	90.0	9	90.0	7	70.0	4	40.0	3	30.0
Okeluse	106	90.6	30	25.6	15	12.8	10	8.5	112	95.7	106	90.6	75	64.1	47	40.2	65	53.8
Imeri	32	69.6	2	4.3	2	4.3	1	2.2	35	76.1	29	63.0	26	56.5	6	13.0	9	19.6
Total	708	71.6	199	20.1	166	16.8	189	19.1	709	71.7	717	72.5	548	55.4	427	43.2	470	47.5

Sources: Author's field work in 2010.

5.30 Hypothesis 3 result on measuring the functionality of health care facilities

This section presents the hypothesis as tested in the study. The third hypothesis states that the ownership of health facilities does not affect its functionality. That is, functionality is the function of ownership. F = f (ownership). The hypothesis is expressed in this model equation:

$Y = \beta_0 + \beta_1 X_1 + e_1$,

where X is measured by each variable of functionality, and Y is measured by the ownership of facilities having binary variables that take the value of unity when the owner of the facility is government and 0 when it is otherwise.

The model is disaggregated thus:

The result of testing the hypothesis 3 in this study is presented in table 5.35.

Table 5.32: The Result of the Logit model for health facilities functionality

$Y = a + bX_{1+}e_1$

Functionality measure	Intercept	Odd ratio	-2Log-L	Pseudo R^2
Staff adequacy	0.290	1.70 ***	1166.682	0.020
	(0.000)	(0.000)		
Response to emergency	0.841	1.26	1367.349	0.001
	(0.70)	(0.356)		
Attitude of staff to patients	3.632	1.854 ***	881.423	0.022
	(0.000)	(0.000)		
Cost of service	0.317	0.561 ***	952.254	0.020
	(0.000)	(0.000)		
Availability of modern equipment	0.358	1.190	1177.146	0.002
	(0.000)	(0.224)		
Availability of drugs	0.215	2.536 ***	1124.324	0.056
	(0.000)	(0.000)		
Designed capacity (No of beds for in-patients)	1.184	0.490 ***	1329.004	0.041
	(0.070)	(0.000)		
Community involvement	1.635	0.680 ***	1343.723	0.012
	(0.000)	(0.003)		
Effective management	1.328	0.718 ***	1361.972	0.009
	(0.003)	(0.010)		

Sources: Author's field work in 2010. Note: *, ** and *** depicts significance at 10%, 5% and 1% respectively.

The results of logit model indicated that functionality parameters such as staff adequacy, attitude of staff to patients, cost of service, availability of drugs, community involvement, and effective management were significant at 1 percent level of probability (0< 0 .01), while response to emergency and availability of modern equipment were significantly different from zero (see table 5.32). This indicates that ownership of health facilities influenced the staff adequacy; the level of staff adequacy in government-owned facilities was different from private. The level of the significance was 70.8% higher in government-owned than in private facilities. By implication, even though the earlier result has shown a gross inadequacy, yet the staff strength in government-owned facilities was far higher than in private.

In terms of response to emergency, the result is not significant as shown in the table 5.32. This means that one could not determine response to emergency based on ownership or response to emergency is not ownership-related, for the response was almost equal. The interpretation is, whether government or privately owned, the ownership did not affect the health facility's functionality.

In terms of attitude of staff to patients, the result shows a high level of significance at 1 percent of p-value, meaning the attitude of staff to patients at the facilities was higher and warmer in government-owned facilities than in private by 85.4 percent. This means that staff attitude might not be hostile as such in government-owned, because it might lead to low patronage which eventually would affect the functionality of the facility and the staff might lose their jobs if there was any complaint from the people and the management. On the other hand, the private facilities too, because of too many auxiliary nurses and quack paramedicals, might show hostile attitude to patients since they might not have been adequately trained on medical ethics and patient-nurse relationship.

With reference to the cost of service as one of the measurement of facility functionality, it is shown clearly from the result in the table that the result is significant at 1 percent of p-value. It means that the government-owned facilities were more costly than the privately owned ones by 43.9 percent. This result supports the survey conducted on the decentralised delivery of primary health services in Nigeria where it was discovered that charges were imposed on drugs in Kogi and Lagos states by 68.65 percent of the remaining charges (World Bank, 2004). The result too showed that in a competitive economy, since the price was determined differently as a result of demand and supply, the private individuals might tend to lower their charges to accommodate more customers. More so, if the drugs were bought by the owners it tended to be cheaper than when a contract for supply of drugs was awarded, as in the case of the government-owned facilities.

The result of modern equipment availability shown in the table is not significant. Even though availability of modern equipment is pivotal to the functionality of facilities, it is found not to be ownership-related in the table result. Thus, whether or not they were owned by the government did not affect the functionality (the government and private are almost the same) of the facilities. Although from the earlier result there was a gross inadequacy in the supply of modern

equipment, but there was no variation between the government-owned and the privately owned health facilities.

Availability of drugs result in the table indicates a high level of significance in determining the functionality of facilities. This was higher in government-owned facilities by 53.6 percent in spite of non-availability of drugs as reported by the respondents. There were more drugs (essential) in public (government) owned than in privately owned facilities. This discriminated against the result of the NEEDS assessment survey that SAP had led to a significant reduction in health care financing by governments, which manifested as 'out of stock' (OS) syndrome in public health facilities and introduction of the user charges. This might be as a result of the new administration's dedication to the health care of the people.

Meanwhile, the design capacity of the facility in terms of the number of patients for bed was significant, as shown in the table. This means the government-owned facilities would be better in terms of design capacity than the private, because of resources committed to public facilities unlike in the privately-owned facilities.

Table 5.32 also indicates that community involvement was significant by 68 percent in government-owned than in private facilities. This was because the private might not have strong enough political will and adequate financial resources required to do that. Also, the private, being profit-oriented, might not be able to commit fund to organise a forum for community participation or involvement.

Finally, effective management, as one of the functionality measures, in the table is significant at one percent (1%). This means that effective management was more in government-owned facilities than in private. This result negates the conventional belief that organised private sectors in health care delivery will do better than their public counterparts, owing to failure of the public health providers. For instance, World Bank (2004) observed that management standard was generally higher in private (for profit) sector.

5.31 Patronage of health facilities in the study area

Table 5.33 presents the patronage of health facilities in the study area of Ondo State. According to Olajuyin et al. (1997), patronising the nearest service would help in minimising the route distance. Ideally, consumer behaviour pattern is explained as that consumer of goods and services do conform to the principle of economic rationality and will, therefore, aim at optimality in the decision-making. From the analysis on facility patronage, it can be deduced, generally, that the majority of the respondents patronised the health facilities in their areas. This accounted for 817 (82.6 percent) as against 174 (17.4 percent) who did not patronise the health facilities. Within the settlement, variation shows that those who patronised the health facilities less were the Ugbo and Uale Nla respondents, who were 18 and 4 (36.0 and 28.6 percent), respectively. The variation is further contained in table 5.36.

Table 5.33: Respondents on the patronage of health facilities in the study area

Area	*Patronized*	*%*	*Not paronised*	*%*		*%*
Igbokoda	201	86.3	32	13.7	233	100.0
Ugbo	32	64.0	18	36.0	50	100.0
Uale Nla	10	71.4	4	28.6	14	100.0
Oberawoye	62	83.8	12	16.2	74	100.0
Idi-Ogba	70	88.6	9	11.4	79	100.0
Odumogun	13	81.3	3	18.8	16	100.0
Iju	278	83.0	57	17.0	335	100.0
Araromi Camp II	11	73.3	4	26.7	15	100.0
Oladele & others	8	80.0	2	20.0	10	100.0
Okeluse	90	76.9	27	23.1	117	100.0
Imeri	42	91.3	4	8.7	46	100.0
Total	817	82.6	172	17.4	989	100.0

Sources: Author's field work in 2010.

5.32 Facility's effect on respondents

Tabble 5.34 deals with the question on what effect the facility had on the respondents. The options available to the respondents were 'improved' and 'not improved'. NA means Not Applicable. Out of the entire respondents, 684 (69.2 percent) indicated that their patronage of health care facilities had improved their health; 133 (13.4 percent) claimed it had not improved their health; and 17.4 percent were indifferent. Considerable variations in responses can be noticed among the settlements, from the table. For example, there was a slight increase in the percentage of respondents in Odumogun whose health conditions were not improved. They accounted for 6 (37.5 percent), compared to Uale Nla where 5 (35.5 percent) claimed their health had been improved. This does not mean that improvement in their health status indicated good health conditions, but could be as a result of self-medication, or other means of medication, which had greatly improved the health of the respondents.

The result has not certified the criterion of impact on work process, as part of organisational domain of facilities which attempts to examine the degree to which the system improves the patients' health outcomes.

Tabble 5.34: The Effects of patronage of health facilities on the health status of the respondents

Area	*Improved*	*%*	*Not improved*	*%*	*N/A*	*%*	*Total*	*%*
Igbokoda	117	76.0	24	10.3	32	13.7	233	100.0
Ugbo	20	40.0	12	24.0	18	36.0	50	100.0
Uale Nla	5	35.7	5	35.7	4	28.6	14	100.0
Oberawoye	53	71.6	9	12.2	12	16.2	74	100.0
Idi-Ogba	63	79.7	7	8.9	9	111.4	79	100.0
Odumogun	7	43.8	6	37.5	3	18.8	16	100.0
Iju	245	73.1	33	9.9	57	17.0	335	100.0
Araromi Camp II	7	46.7	4	26.7	4	26.7	15	100.0
Oladele & others	7	70.0	1	10.0	2	20.0	10	100.0
Okeluse	65	56.6	25	21.4	27	23.1	117	100.0
Imeri	35	76.1	7	15.2	4	8.7	46	100.0
Total	684	69.2	133	13.4	172	17.4	989	100.0

Sources: author's field work in 2010.

5.33 Proposal for planning new health care facilities distribution in the study area

Proper planning would ensure efficient distribution of health care facilities in the area With respect to the facility distribution, having taken into consideration the existing problems emanating from the planning in the area, the study proposes a hypothetical planning of health care facilities, using the population of 1991 as a base year to project up to 2021 with a growth rate of 2.8 percent (being an average growth rate for rural area). This proposal takes into cognizance the theory of central place as anchored in the planning. Meanwhile, the private clinics or hospitals are expected to consult with the Ministry of Health for proper accreditation on the type plan required.

Although various variables have been considered under the health facility distribution, they are also replicated in maps of the three different LGAs of the study. Within each LGA, all the settlements will be used as a catchment area for the proposed facility. Tabble 5.35 shows the distribution by wards.

Tabble 5.35: The Projected distribution of health care facilities in the study area for 2020

Name of settlement	*Base pop. 2010*	*Projecetd pop.(2020)*	*Health post*	*Maternity/ Clinic*	*Basic health*	*Comp. health*	*Gen. hosp.*	*Private hosp.*
Iju	19,466	25501	0	0	1	0	0	0
Araromi camp	1,072	1166	1	0	0	0	0	0
Oladele Camp & others	674	733	1	0	0	0	0	0
Imeri	3266	3549	1	0	0	0	0	0
Okeluse	8223	8931	1	1	0	0	0	0
Ayetoro	14521	25227	1	2	1	0	0	0
Idi-Ogba	5539	6020	1	0	0	0	0	0
Ugbo	3541	3848	1	0	0	0	0	0
Igbokoda	16378	17798	0	1	1	0	0	0
Oberawoye	5197	5648	1	1	0	0	0	0
Uale Nla	1010	1098	1	0	0	0	0	0
Odumogun	1109	1206	1	0	0	0	0	0

Sources: Author's field work in 2010.

The proposal reflects the hierarchical system of health care facilities, as established in Cristaller's theory. The study integrates the possibility of future growth and expansion of the study area into the status of urban planning, spreading across the primary, secondary and tertiary health care facilities. From the table, Ugbo Ward 2 and Mahin Ward 3 have the highest number of health posts, while Okeluse Ward 2 and Imeri Ward have the lowest in the distribution. The variation across the settlement is shown in the table. The growth of the two wards, Ugbo and Mahin, shows that, in ten years they will still not have grown enough threshold population to deserve a comprehensive health care facility.

Furthermore, in the area of human resources, given the standard ratio of 1: 600 for doctor to population, and nurses to population ratio too, the Tabble 5.36 shows the distribution across the settlements. Just as the facilities, the distribution reflects the highest number of human resources, in which Ugbo Ward 2 and Mahin Ward 3 are comparable.

Tabble 5.36: The Proposed number of nurses in the study area by the Year 2020

Name of settlement	*Base pop. 2010*	*Projected pop. 2020*	*Proposed no. of nurses*					
			Health post	Maternity/ Clinic	Basic health	Comp. health	Gen. hosp.	Private hosp.
Iju	19466	25501			51			
Araromi Camp	1072	1166	2					
Oladele Camp	674	733	2					
Imeri	3266	3549	7					
Okeluse	8223	8931	18	18				
Idi-**Ogba**	5539	6020	12	12				
Ugbo	3541	3848	8	8				
Uale Nla	1010	1098	2	2				
Igbokoda	16378	17798	36	36				
Odumogun	1109	1206	2	2				
Oberawoye	5197	5648	11	11				

Source: Author's field work in 2010.

Tabble 5.37: The proposed number ofmMedical doctors in the study area by the year 2020

Name of settlements	***Base pop. 2010***	***Name of settlements***	***Base pop. 2010***	***Projected pop. 2020***	***Number of Doctors***	***Expected no. of doctors***					
						Health post	**Maternity / Clinic**	**Basic health**	**Comp. health**	**Gen. hosp.**	**Private hosp.**
Iju	23466	Iju	19466	25501	43			43	-	-	-
Araromi Camp	1072	Araromi Camp	1072	1166	2	2	-	-	-	-	-
Oladele Camp	674	Oladele Camp	674	733	1	1	-	-	-	-	-
Imeri	3266	Imeri	3266	3549	6	6	-	-	-	-	-
Okeluse	8223	Okeluse	8223	8931	15	15	-	-	-	-	-
Idi-Ogba	5539	Idi-Ogba	5539	6020	10	10	-	-	-	-	-
Ugbo	3541	Ugbo	3541	3848	7	7	-	-	-	-	-
Uale Nla	1010	Uale Nla	1010	1098	2	2	-	-	-	-	-
Igbokoda	16378	Igbokoda	16378	17798	15		30	30	-	-	-
Odumogun	1109	Odumogun	1109	1206	2	2	-	-	-	-	-
Oberawoye	5197	Oberawoye	5197	5648		9	-	-	-	-	-

Sources: Author's field work in 2010.

With regard to other areas of standard requirements in the physical characteristics of health care facilities, as examined in chapter four of this study, figures 5.1, 5.2 and 5.3 show the spatial distribution of the proposed facilities based on Walter Cristaller Theory of Hierarchy of Goods (facilities, in this study).

As articulated in the Cristaller, the distribution of the facilities were predicated on the notion that if a particular health planning facility had a very small catchment area, then the area in which it was located should need many such facilities to cover the area in question in terms of services. Conversely, if a facility had an extensive catchment area, there would be need for very few (and probably only one) of such type of facility to cover the area in question in terms of services. The frequencies of need as well as the type of services rendered, therefore, determined the spatial pattern of different types of health care facilities, presented in this proposal.

Furthermore, the proposed site area required for different categories of health care facilities is also presented in Tabble 5.38. Variables covered in this regard include site area in hectare; floor area covered by structure in hectare (building density); open space; service area required; and the bed space needed (taking into consideration the population of each settlement, vis-a-vis the number of bed required).

Tabble 5.38: Proposed site areas for health care facilities in the study area

Facilities	*Location*	*Site Area in hectare*	*Floor area covered By structure in hectare*	*Open space*	*Service area*	*Bed space*
Basic health centre	Iju, Imeri, Oberawoye	2.4	1.5	0.9	*Outpatient department (OPD), *Family Planning unit. *Pharmacy,*treatment,*health education*immunizations *store *circulation	3,084 Each
Comprehensive health Centre and Cottage	Okeluse,/ Igbokoda,	6	3.6	2.4	*General Medicine including (2 consulting rooms and radiography) *Maternal and Child Health*Maternal and Child Health*Pharmacy*General Service*Family Planning unit.*Circulation*Outpatient department (OPD),	4,800 Each
General Hospital	Iju, Igbokoda	20	9.4	10.6	*General Medicine including (2 consulting rooms and radiography)*Maternal and Child Health*Pharmacy*General Service*Circulation*Specialized Medicine(Ear Nose, Throat) *Ophthalmology and Dentistry *Radiography *Laboratory Extra Space for additional consulting room, general services and possibly a rural maternity unit and a tuberculosis clinic	4,800
Health Post	Iju,	2.4	1.0	1.4	*Family Planning unit. *Pharmacy,*treatment,*health education*immunizations	17
Maternity	Okeluse	2	1.5	0.9	The general services + consulting rooms + circulation if not attached to Private clinic (general Hospital)	20
Clinic	Ife Olu Medical Clinic, Iju; Adelabu clinic, Okeluse; Ebenezer Medical Clinic, Igbokoda	2	1.5	0.9	Some general services + circulation if not attached to a general Hospital	80 Each
Private Hospital	Adeyemi Hospital, Iju; Ayemafuge, Igbokoda	As in General Hospital	As in general hospital	As in general hospital	*Outpatient department (OPD), *Family Planning unit. *Pharmacy,*treatment,*health education*immunizations	600 Each

Source: Author's field work, 2010

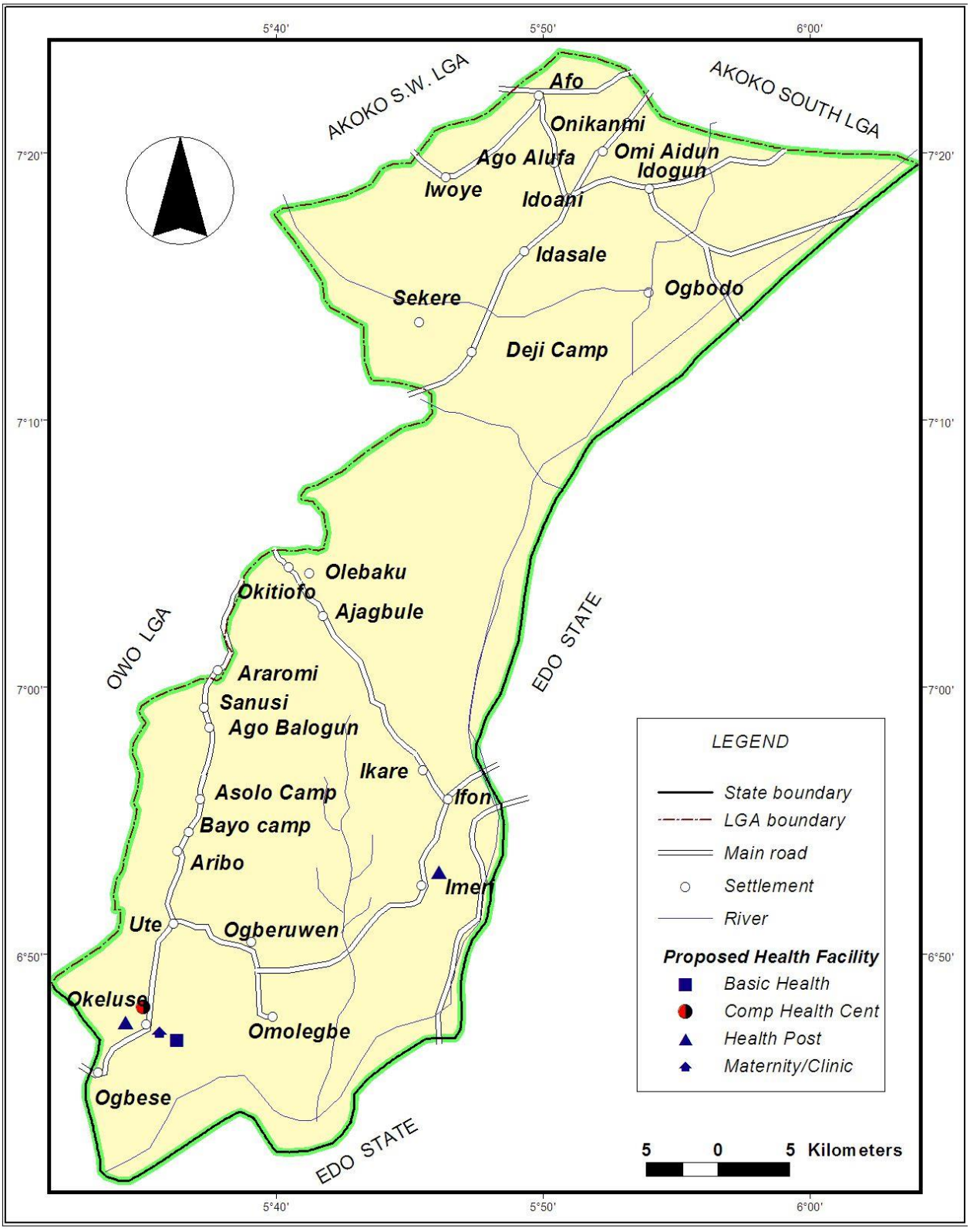

Fig 5.1: Proposed Distribution of Healthcare Facilities in the Selected Settlements in Ose LGA by 2020

Source: Ministry of Lands and Survey, Akure, Ondo State, 2011

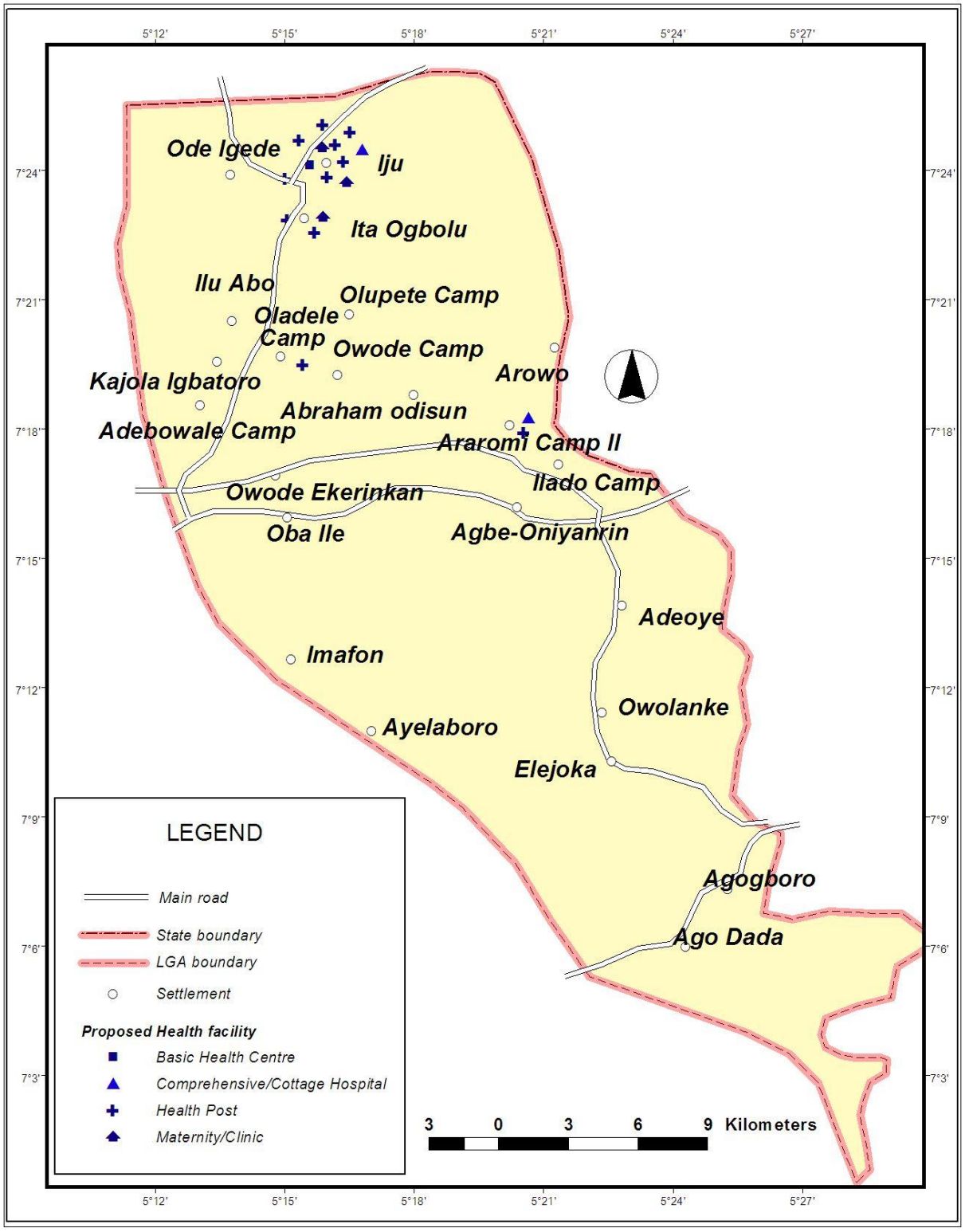

Fig 5.2: Proposed Distributions of Healthcare Facilities in the Selected Settlements in Akure North LGA by 2020

Source: Ministry of Lands and Survey,Akure, Ondo State, 2011

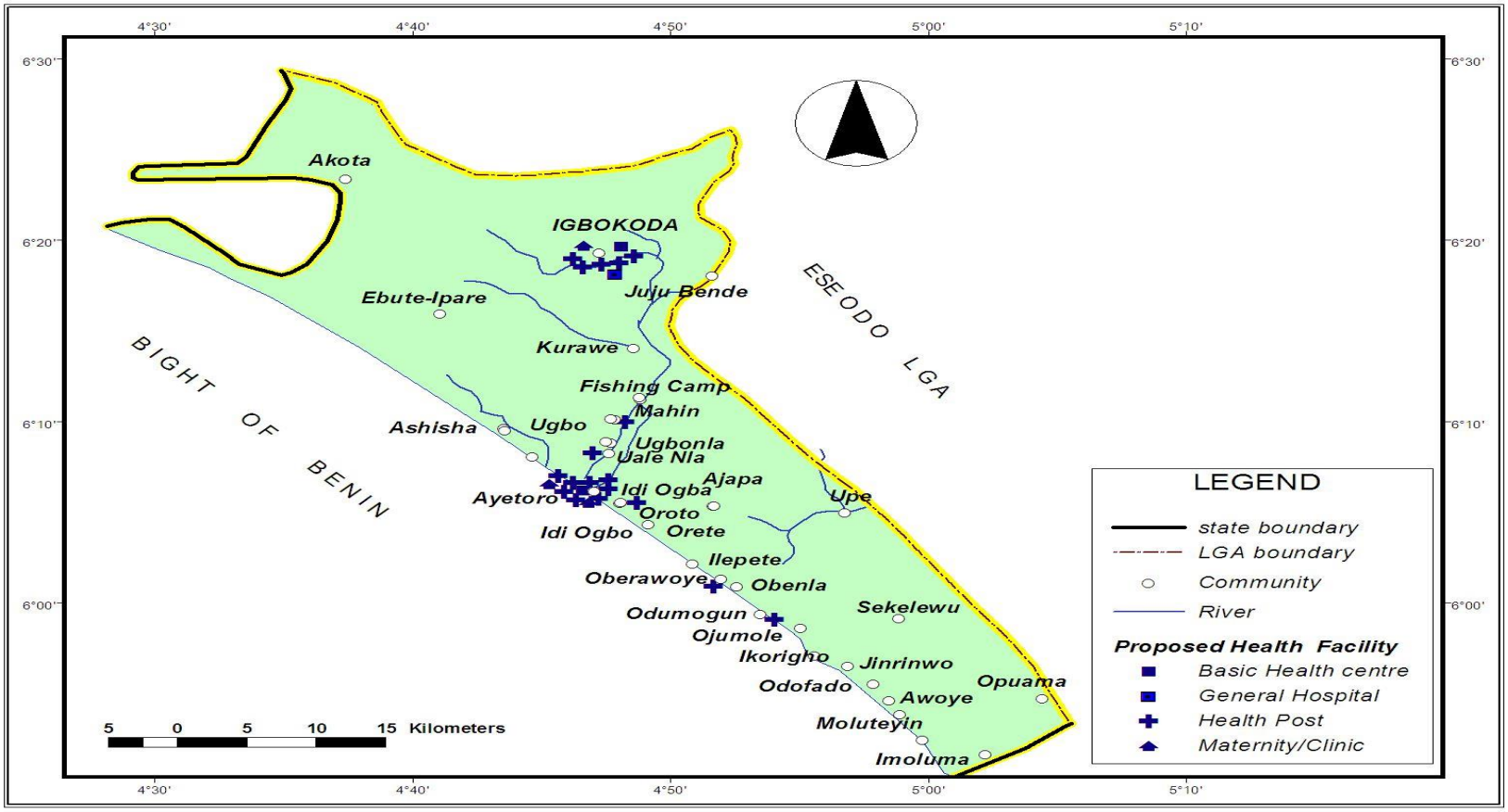

Fig 5.3: Proposed Distribution of Healthcare Facilities in the Selected Settlement in Ilaje LGA by 2020

Source; Ministry of Lands and Survey,Akure, Ondo State, 2011

CHAPTER SIX

SUMMARY OF THE FINDINGS, CONCLUSION AND RECOMMENDATION

6.0 Introduction

This is the concluding section of the study. In the concluding part there will be discussions on the summary of the findings, the theorectical implication of the study and the pratical implication of the study. Other concerns to be touched in rounding up the study include its contribution to health care facility planning, and ultimately recommendation.

6.1 Summary of the Findings

The study analyses the planning and management of health care facilities in sampled rural areas of Ondo State, Nigeria, with a view to understanding how existing institutional arrangements in the health sector have been able to impact health service delivery. The methodology involved the use of three different types of questionnaire, specifically addressed to the users, the service providers and the policy makers, having 989, 13 and 4 questionnaires, respectively.

In respect of the objectives of the study, the first one deals with generating a detailed profile of orthodox health care facilities in the study area, in terms of ownership, location, accessibility, design capacity, quality and patronage. The study reveals that facilities are both privately (65.0%) and publicly (45.0%) owned, with the public constituting the higher number. The majority of the facilities (83.8%) were located in favour of the users. Accessibility was low due to lack of essential drugs, at 63.2% responses. Availability of modern equipment was indicated by 56.5% respondents. Shortage of both medical and paramedical staff was high with 43.3% respondents in its regard, among others. Similarly, the design capacity and quality of operation were very low. Ultimately, this affected the level of the patronage of the sampled health facilities in the study area of Ondo State.

Investigating the diverse planning and management strategies adopted for health care facilities delivery was the second objective. The study reveals that, the strategies adopted were the top down approaches which did not involve local participation of

people in the sampled three local government areas. It is clear that the sources of finance for health care facilities in the public health care facilities were predominantly through government allocation and user's charge; these applied in all the LGAs.

The third objective was to analyse the pattern of distribution and the degree of conformity of existing orthodox health care facilities to planning guidelines. The result of the survey shows that all the facilities deviated from the planning standard requirements as set by the WHO, particularly in terms of dimensions of site building, density and the service area, among others, which were required for ideal categories of health care facilities. The distribution shows a clustering pattern using the nearest neighbour analysis (NNA), and it revealed poor planning which made some of the facilities to be under-utilised.

Finally, peoples' perception of the planning and management of health service delivery shows that, even though the institutional arrangement given was expected to impact the service delivery outcomes, the reverse was the case. The framework on which the facilities management were based was faulty, as the management framework gave no room for a reasonable level of participation, represented by 42.31 percent of the respondents, the targeted beneficiaries.

Regarding the hypotheses, the results show there was weakness in the planning and management of the health care facilities. As such, facility planning and management should be given priority in the health sector. Logit model also reveals that all functionality variables of health facilities were jointly affected by ownership at 1 percent level of probability ($P < 0.01$). The regression analysis shows that all the factors were significant in influencing peoples' health status (F-value of 5.282, $P < 0.05$). A significantly negative correlation is also observed between proximity and patronage of facilities ($r = -0.188$, $P < 0.01$). Furthermore, the regression analysis shows that all the parameters involved in planning and management of the health care facilities had significant influence on the health status of the people (F-value of 15.541, $P < 0.01$).

Out of the ten, three private (21.43 percent) hospitals were involved in engaging absolute participation in their facility management. This implies that those facilities that did not involve the communities might not enjoy a high patronage. As explained by KSPA (2004), community involvement in the management of facilities would encourage

the people to make useful inputs into the facility's function; it would make the facility more accountable to the community it serves; and would help the facility's operators understand the community's needs. In other words, such participatory approach to facility management will ensure health facilities management efficiency, accountability and transparency.

Indeed, the management of health care facilities can be concluded to be adequate, given that a larger percentage of the facilities enjoys routine management meetings. It is in this way that effective health care operation will be guaranteed. Meanwhile, all the basic stages of the routine meetings, on managerial and administrative matters, and the number of times they should be held have to be strictly adhered to and kept. While in the study in the sampled three LGAs of Ondo State, the majority of the health care providers involved the community in key management meetings, it did not have a proportionate and really commendable impact in terms of efficient health care delivery, with all indices considered.

6.2 The theoretical implication of the research

Health care resources distribution has been studied at scales ranging from the nation to neighbourhood. According to Onokoraiye (1999), there was no clear theoretical basis for planning and management of spatial efficiency of public facilities. The literature, however, is replete with a wide range of concepts and principles which can provide the framework for the analysis and planning of health care facilities in a developing area like Ondo State, Nigeria. More so, effective planning and management of health care facilities will encourage their optimal utilisation. One of such theories, as used in this study, is Central Place Theory developed by Walter Cristaller (1933).

The empirical findings of this study indicate that the methodological application of the theory to the current study negated the original postulate of Cristaller, in that more facilities were allocated to the sampled area without recourse to the minimum threshold requirement for providing such facilities. For instance, the original requirement for establishing basic health centre by planning standard is 30,000 people. One out of all the categories of health care facilities should be enough to serve Iju settlement. However, the

study reveals that four different categories of health care facilities were located there, thus making the planning of health care difficult.

The findings also show the range of goods always expressed in terms of the maximum distance the users will be prepared to walk beyond which their health become stressed up. The maximum distance for every health care facility is 5km, in this regard. Since there is an over-supply of health facilities to serve smaller population within the catchment area, the method was, therefore open, to query. Though the result shows that 91 percent of the respondents walked within the standard distance range, it can then be argued that the distance of the facilities fall within the catchment area required for all the facilities located in the study area confirming the theory.

In the area of medical personnel, the distribution did not meet the required standard for the various medical personnel to population ratio. The findings show that while facilities of higher order, like general hospitals, did not have adequate qualified staff, some of the lower-order health care facilities enjoyed relative availability of medical personnel fitting for that category of higher-order health care facilities. The Central Place Theory was again misapplied, as shown in the poor facility planning in the study area. The theory emphasises that patient population in need of service should be able to find a facility and professional staff within a reasonable time and distance from their places of residence. Studies that have confirmed acute shortage of medical personnel to health care facilities include the works of Onokoraiye (1981) Onokorahye (1999) and Olujimi (2003).

Similarly, the application of this theory has been demonstrated in Ife Division by Abiodun (1970) and in Ekiti Division of the Old Ondo State by Olajuyin (1976). The Central Place Theory was not directly applied to social facilities. Onokoraiye (1991) used the theory and confirmed its applicability to health care facilities planning, but he wondered how its applicability would be possible in a settlement where the population size was very small, such as a rural area and the transport facilities were poorly developed or non-existent. In the view of Okafor (1982), the theory was applicable to the extent that population could serve as a basis for locating health facilities, but he contended that Central Place theory was not ideal. He criticised the theory's claim that market forces should dictate the thresholds and ranges for each level of health care

service. He explained that social welfare issues should override issues of economic efficiency. Therefore, the government might have to establish facilities with smaller minimum populations than central place theory justified.

Conversely, Olujimi (2003) in its application of the theory to rural health care facilities' patronage argued that the theory had been able to provide foundation for the analysis of health care patronage pattern in the rural area. In spite of all the divergent works of different scholars and views on the central place theory, the findings show that the theory was wrongly applied by the planners of the health care facilities, and it, invariably, affected the health care delivery in the study area in Ondo State. The theory can only be said to be inappropriate for facility planning, if problem arises after planners have applied it, thereby creating another premise for intellectual debate on the best theory to use. In conclusion, the theory as revealed by the findings in this study shows a problem of misapplication rather than a problem with the theory itself.

6.3 Practical implication of the research

The empirical findings in this study show that space standard based on a set of rules that guided the use of space for physical development in order that such development might satisfy certain environmental, economic and social needs had not been met or strictly adhered to. In particular, the minimum population required for the location of each category of health care facility, within a maximum walking distance radius, had not been met, as revealed by the study. Besides, the planning variables (considered in this study) such as the covered floor area in hectare, bed space, allocation of land within the site (in terms of land for structure (building), access open space (road), as well as locational sites for different categories of health care facilities) showed a remarkable deviation from the required planning standard in terms of measured dimensions (Vagale, 1971; WHO, 1985; HKPITA, 2011), thereby affecting the overall health care delivery.

Moreover, from the findings, a sharp disconnect between the health care policy maker and the users can be identified. Perceptions of people in terms of cultural consideration, collaboration between the major actors in health care facilities, and the users can be said to be generally absent in the planning of health care facilities. This was

the case in spite of the ever increasing demand by national health policy for collaboration in the health care sector. In respect of the facilities' management too, the management structure requirement had not been properly followed and the facilities were therefore being poorly managed. Issues of community dialogue, general complaint and supervision of management at both the facility and village development committee levels, examined in the study, contributed to the poor facilities' management. The findings show how germane they were to ensuring smooth running of the health care facilities.

There was a very serious challenge in terms of personnel and medical equipment in all the facililties surveyed, furthermore. The personnel and medical equipment were inadequate and the situation demanded serious attention. This problem is, however, prevailing in the whole country, given the low level of admission into the medical schools. In addition, local technologies, yet, needed to be taken into consideration in building health care facilities.

6.4 Recommendation

To improve the prevailing situation, the problems with rural health facilities is to be addressed both at the macro (national and state) and micro (local) levels in a holistic manner, with an emphasis on integrating the interest of the poor (of the population) in the country's health fiscal policies. A paradigm shift from biomedical mode to a socio-cultural model is required to meet the health care needs of the rural population. A comprehensive revision of the national health policy must be done in order to address the existing inequalities or imbalances in the planning and management of health facilities. There is also the necessity to work at developing a long-term plan exclusively to address the rural health problems in the country.

From the survey, it appeared that, by categories, the LGAs health facilities staff to population ratio depict a shortage, going by national and international standards, yet the major problem was the uneven distribution of the available personnel within the LGAs. Virtually all the LGAs were without trained frontline health facility workers in all the facilities. So, the LGAs should ensure equitable distribution of existing health care manpower, at the LGA level. In other words, efforts should be made to train and employ

more appropriately trained staff to improve users' access to the health services. All the facilities are to be adequately staffed for quality service delivery in the rural areas.

Hardly too was there any user's charge policy existing in the rural health sector, although relatively small charges were taken for service deliveries, as indicated in Chapter 6. So, the more cost effective and efficient strategies for optimal utilisation of priority personnel can be adopted. Moreover, outreach and mobile health care services can be employed in the under-served areas. Efforts should also be made at striking a better balance between government financing of health facilities and user charges. Communities or settlements should be encouraged to determine payment exemption and deferment criteria, because the people are more aware of the socio-economic forces, operating within their environments and the economic status of their members. The community should also identify sources or defraying cost so as to avoid de-capitalisation.

The interpretation of the study also shows that greater community participation would make facilities' staff more responsive to the health needs of the community they serve. There are alternative interpretations, however, and the analysis undertaken in this study is too limited to draw strong conclusions about the impacts of community participation on health service delivery. For instance, the richer or more educated communities might be both more likely to participate in the management of health facilities (public ones) and have greater demand for health services, leading to high productivity of health staff. So, an alternative tailored research design is needed for such a participatory impact evaluation, particularly considering community income and education levels. Indeed, this underscores the importance of local government responsibility for public health management and proper coordination and sharing of responsibilities with community-based organisations (CBOs) or village development committees (VDCs).

Public-private partnership should be encouraged in the rural health sector. While the private health care establishments may be profit-driven, yet they will enjoy good patronage if encouraged to improve their health services. According to the result of the first hypothesis, where one was lacking, the other one made up. The patients were also found ready and prepared to pay any amount so long as it bordered on their health. Axelson, Bustreo and Harding (2003) buttressed that a variety of cooperative

arrangements between the government and private sector in delivering public goods or services provided a means for coordination together with non-governmental actors and ensured integrated and comprehensive efforts at meeting community health needs. Such cooperative arrangements help to employ the expertise of individual partners to the effect that resources, risks and reward could be allocated to optimally meet clearly defined public needs of goods and services.

Concerning the availability of drugs in health care delivery, all the health providers should ensure that all the drugs bought are original and would meet the immediate needs of the people. This can be possible if the drug revolving fund is adequate and standardised. Certainly, there should be contained in the policy guidelines, an establishment of a more effective and flexible drug procurement, storage and pricing system which will allow extensive participation of community representative at all levels. While regular supervision and monitoring can reduce the practice of sale of private drugs by health workers, agreeable policies of providing appreciable incentives to the health workers will also need to be adopted so as to improve their income and job satisfaction, thus stemming the undesirable unethical misconduct.

Logistic support in health facilities varied from one settlement to another. A common factor determining the level of logistic support was poor road network (infrastructure). The roads in the rural areas should be rehabilitated. Another related factor, as shown in the study, was proper transportation for facility delivery access. The transportation modes were either grossly inadequate or poorly maintained. Thus, the use of public transport or appropriate means of transport should be promoted.

Lack of basic equipment at the health facilities was a concern. There was also lack of proper guide on a standard equipment list for each facility type, leaving room for maneuvers in the purchase of the equipment. So, effort has to be made to see that there is a routine maintenance for the available equipment and also to get the facility staff trained on the equipments' uses. This is necessary if quality facility services were to be provided to ensure a significant impact on the health and well being of the rural dwellers in Ondo State. Again, this is applicable elsewhere in the country. Communities can also have custody and take ownership of health facility equipment, which they will hand over to the officer in charge of health facility after signing a written memorandum of understanding

on the equipment's use and maintenance. Such an officer in charge, when transferred, would have to hand over the equipment back to the community. Such an arrangement would encourage full community involvement in facility planning and management for an impactful health service delivery.

Except in one of the sampled facilities, no record of HMIS was indicated to be existing, the home-based record expected to provide entry point to the health system was, to all intents, out of use. With this, therefore, it is pertinent that training and re-training on the use of all HMIS forms must be taken with all seriousness in the levels of health care facilities. In addition, the various agencies involved in the production of forms and modalities should be up and doing and make the forms regularly available. Plans of action for sustainable production of the HMIS forms and mechanisms for regular supportive supervision on their use should be put in place, furthermore.

There is the need to overhaul the village development committee to allow for adoption of effective strategies for planning and management of health facilities for sustainability, improved quality of care and better linkage with formal health care system. In all the facilities surveyed, there existed no traditional birth attendant, which is recommended by the health policy in Nigeria to bring health care delivery to the people.

This study further recommends an institutionalised framework for land management. The present various agencies that were responsible for the land management and allocation should be coordinated enough through a deliberate policy for adequate and effective physical planning and design to favour of health care facilities. In 1999, the Ondo State government enacted the state version of the 1992 National Urban and Regional Planning Law which assigned responsibilities to all the three tiers of government. Several years after the enactment, the stated responsibilities are yet to be implemented, especially in the study area. This land management and allocation anomaly has to be corrected to facilitate efficiant health care delivery.

The shortage of trained and experienced planners and designers of health building is one of the main obstacles to the implementation of an appropriate building program, especially in the health service sector. There is the need to train more human resources (doctors, nurses and paramedics) and health facilities' planners (as medical facilities planners are virtually non-existent) and designers. The policy makers, too, should ensure

effective use of standard designs which is referred to as proto-type design plan, since it will minimise costs of health care delivery. In the same vein, as there was virtually no facility that used building materials to its fullest in the rural health sector, locally available building skills and materials must be recognised as valuable, and employed in providing appropriate health facilities. The usual rather extensive use of imported skills, materials and technology tended to result in architectures that were incongruent with local functional requirements, geographical conditions, climate concerns and cultural values. The use of local materials and skills is strongly recommended.

Special programmes on medical facilities planning should be included in curriculum planning programme in planning schools, for this will take care of the acute shortage of expert in health facility designers, as evident in the study. Similarly, while there have been management strategies based on diverse classical theories, no hospital management guide was found to help in the study area of Ondo State. This made the management of the facilities difficult. Facility management program has to be designed and developed according to the peculiarity of facility types and needs.

6.5 Contribution to planning knowledge

One of the problems with health care facilities' planning in many countries, particularly those with market economies, lies in the multiplicity of decision centers. Basically, each facility has a standard staffing pattern and, in principle, it covers a defined range of population, and the ratio of facility functions to population. Unfortunately, no single document existed which detailed the entire planning standards for health facilities. This situation, consequently, made planners of facilities pay less attention to the standard planning standard. With this study, researchers and policy makers will be able to ascertain and adhere strictly to the planning standards for the facilities in the study area, and elsewhere in the country.

6.6 Conclusion

As discussed in the introduction of this study, the motivation for this study primarily is to explore the broad issues that border on planning and management of health

care facilities and their impact on the lives of rural dwellers in Ondo State. The conclusions and policy lessons emerging from this study are cross-cutting. They have stressed accountability by the health care institutions and the stakeholders as crucial determinant of the extent to which both the policy makers and the health care providers are effective in health care services delivery. The study has illuminated on salient variables in health care delivery, which include facility infrastructure, staffing patterns, availability of essential supplies, equipment and services, the management process and health care issues involving local and community development committees, while emphasising their significance in enhancing the functionalities of the health care facilities.

The study has demonstrated that planning and management of health care facilities is still a weak aspect of health development in the sampled areas. In some cases, there were virtually no health care planning and management at all, indeed. Mainly, the planning and management inadequacy entailed lack of proper human resources development (inadequate staffing); inadequate understanding of public health; limited capacity for information support; poor functional linkages between the policy makers (the state government and LGAs) and the health providers; centralised decision-making system and weak capacity at the centre; centralised decision-making and weak implementation at the periphery; weak mobilisation of internal resources, among others. Similarly, health programmes in the study area also suffered from the stated deficiencies.

Based on these deficiencies, the next section provides certain recommendation towards efficient and effective health care delivery in the study area and for application in other places in the country, Nigeria.

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APPENDICES

APPENDIX I

DEPARTMENT OF URBAN AND REGIONAL PLANNING
UNIERSITY OF IBADAN, IBADAN, OYO STATE

TOPIC: EVALUATION OF THE PLANNING AND MANAGEMENT OF HEATHCARE FACILITY IN THE RURAL AREA OF ONDO STATE

QUESTIONNAIRE FOR THE TARGET RESPONDENT

The questionnaire is specifically designed to elicit information on the evaluation of the planning and management of healthcare facilities in the rural area of Ondo State. The survey is purely for research purpose and all information will be treated with utmost confidentiality. Please do respond as the questions demand. Thanks for your cooperation.

(i) Name of interviewer…….. (ii) Questionnaire No……..
(iii) Name of settlement ……... (iv) Local Govt. Area……

SECTION A: SOCIO-ECONOMIC CHARACTERISTICS

(1) Age
- (a) Below 18 years
- (b) 18 – 45 years
- (c) 46 – 60 years
- (d) Above 60 years

(2) Sex (a) Male …… (b) Female ……..

(3) Marital Status
- (a) Single
- (b) Married
- (c) Divorced
- (d) Widowed
- (e) Others (Specify)……..

(4) Educational Status
- (a) No formal education
- (b) Primary school leaving certification
- (c) School certification
- (d) HND/NCE/B.Sc
- (e) Degree/Masters/PhD

(5) Occupational Status
- (a) Farming
- (b) Crafting
- (c) Civil Service
- (d) Teaching
- (e) Healing
- (f) Transportion
- (g) Labourer (hired labourer)
- (h) Others Specify……

(6) Income Status
- (a) Less than – N36,000.00 ( )
- (b) N36,000.00 – N72,000.00 ( )
- (c) N72,00.00 – N108,000.00 ( )

(d) N108,00.00 – N144,000.00 ( )
(e) N144,000.00 – Above ( )

(7) Religion
(a) Traditional Worship ( )
(b) Christianity ( )
(c) Islam ( )
(d) Others Specify ( )

(8) Household Size
(a) 1 person ( )
(b) 2 – 5 persons ( )
(c) 6 – 9 persons ( )
(d) 10 – 13 persons ( )
(e) 14 – 16 persons ( )

(9) Length of stay in the place
(a) Less than 5 years ago ( )
(b) 5 – 10 years ago ( )
(c) 11 – 15 years ago ( )
(d) Over 15 years ago ( )

(10) Nationality Status
(a) Nigerian ( ) (b)Non Nigerian ( ) (c) Others Specify ( )

(11) If Nigerian, state of origin……

12) If non- Nigeria, state your country of origin…….

(SECTION B: Characteristic of Health facility)
Types of ownership, location and patronage

(13) Do you have health facility in you area? (a)yes (b)no

(14) If yes,which of this health facilities are available in you area?
(a) Hospital ( )
(b) Health Centre ( )
(c) Private Clinic ( )
(d) Maternity Centre ( )
(e) Dispensary ( )
(f) Others(Specify)…….

(15) Who owns the health facilities in your area?
(a) Government
(b) Private/Non-Government

(16) Do you patronize the health facility? (a)Yes (b) No

(17) If yes, in what is the effect of the patronage on your health?
(a) Improved ( )
(b) Not improved ( )

(18) If no, what are the problems hindering you from receiving health services in your area?
(a) Lack of money
(b) Non-availability of transport facilities when required
(c) The road to health facility is too bad
(d) Transport facility is only available on market days
(e) Non-availability of health workers at the health post
(f) The location of the nearest health facility to the locality is too far
(g) My religion oppose it
(h) Others Specify

Accessibility and quality

(19) Is the health facility close to your area of residence? (a)yes ( ) (b) No ( )

(20) How far is the health facilities to your area of residence?

(a) Less than 5km
(b) 5km
(c) 10km
(d) 20km
(e) Above 20km

(21) How do you get to the health facilities in your area?

(a) Trekking
(b) Bicycle
(c) By Motorcycle
(d) By Bus-private/commercial
(e) By Car-private /commercial

(22) Do you patronize any health facility in your area? (a)yes ( ) (b)No ( )

(23) Indicate the health facilities located outside of your locality that you have been patronizing ……..

(24) How long do you wait for public vehicles arrival to the health facilities?

(a) Less than 30 minutes
(b) 30 minutes – 1 hour
(c) 1 hour 30mins– 1 hour 30 minutes
(d) 1 hour – 2 hours
(e) Over 2 hours

(25) What is the road condition?

(a) Good ( ) (b) Fair ( ) (c) Bad ( )

(26) What types of road connect your area to the health facilities?

(a) Highway
(b) State Road
(c) Local GA Road
(d) Footpath
(e) No Road at all

(27) What is the average transport cost per trip to receive health care facilities?

(a) Under N50 per trip ( )
(b) N50 – N100.00 ( )
(c) N101 – N150.00 ( )
(d) N151 – N200.00 ( )
(e) Over N250.00 ( )

(28) When a member of household is sick, what action is taken by the household?

(a) Did nothing
(b) Self-medication
(c) Go to nearby clinic
(d) Others(specify)……

(29) What type of sickness is most prevalent in your area?

(a) Stomach Pain ( )
(b) Headache ( )
(c) Accident /Injuries( )
(d) Malaria Fever ( )
(e) Yellow Fever ( )

(f) Typhoid Fever ( )
(g) Diarrhea/Dysentery ( )
(h) Guinea Worm ( )
(i) Cough ( )
(j) Others ( )

(30)What is responsible for your choice of a particular health facility for health services?

(a) Nearness to my residence ( )
(b) Quality of service ( )
(c) Attitude of the workers/staff ( )
(d) The type of sickness ( )
(e) Charges (medical cost) are moderate i.e. (affordable) ( )
(f) Privacy is very high ( )
(g) The environment is very neat/hygienic ( )
(h) Severity of sickness ( )
(i) Religion belief or solidarity ( )
(j) Availability of drugs ( )
(k) Others specify ( )

(31) Indicate your choice of health care whenever you are sick.

(a) Modern health facility
(b) Traditional health facility
(c) Self-medication
(d) Spiritual

(32) Is there any problem associated with healthcare delivery in the facility in your area?

(a) Yes (b) no

(33)If yes, why is the health facility difficult to access in your locality?

(a) None ( )
(b) Limited hours of operation ( )
(c) Lack of staff and other resources ( )
(d) Poor infrastructure ( )
(e) Incompetence on the part of the available staff ( )
(f) Poor road access ( )
(g) Cost of transport ( )
(h) Long hours of waiting ( )
(i) Remote location of facility( )
(j) Lack of accommodation for health personnel
(i) Others Specify ( )

(35) How do you think this difficulty can be removed?

(a) Adequately equipping the health facilities
(b) Provide more staff
(c) Encourage staff to live within community in our area
(d) Rehabilitate the road
(e) Others Specify

Functional efficiency of health facility

(36) Give your assessment of the following health facilities in your area under the indicated factor;

(i) Staff adequacy: (a) adequate (b) not adequate
(ii) Response to emergency: (a) slow (b) Very slow (c) Fast (d) very fast
(iii) Attitude of staff to Patient (a) Low (b) High

(iv) Cost of services: (a) Costly (b) Not Costly
(v) Availability of modern equipments: (a) adequate (b) not adequate
(vi) Availability of drugs: (a) sufficient (b) Not sufficient
(ix) Design capacity/no of bed space for in-patient: (a) High (c) Low
(x) Community involvement (a)Yes (b) No
(xi) effective management (a)effective (b)not effective

Management and supervision at the Village or Locality

(37) Do you have any Village Development Committee in your area? (a) Yes (b) No
(38) How many members of VCD are trained in health issues? (Give No, in comment)
(39) Do the VCD participate in the management of health facility in your community?(a)yes ( ) (b)No ( )
(40) If yes, what is their role in the planning and management of facility?.....
……
……..
(41) How many meeting VCD were held within the last three months? (a) less than 1, (b) 2 (c) 3 and above (d) none
(42) If no, give reasons for not meeting ……
(43) Does anybody come to supervise your work? (a) Yes (b) No
(44) If yes, how frequently do you receive supervisory visits? (a) Monthly (b) quarterly (c) annually
(45) When was the last supervisory visit ……..
(46) Did the supervisor use supervisory checklist? (a) Yes (b) No

Health Planning and Management

(47) Does this facility have routine meetings for reviewing managerial or administrative matters? i.e. facility management team. (a) Yes (b) No
(48) How often are meetings held to discuss the facility management and administrative matters? (a) Monthly (b) more often (c) every two-three months (d) every 4 – 6 months (e) less than every six months or irregularly
(49) Is official record of management meetings maintained? (a) Yes (b) No
(50) Are there any routine meetings about facility activities or management issues that include both facility staff and community members? (a) Yes (b) No (c) don't know
(51) Does the facility give feedback of its key management decisions to the community during such routine meeting? (a) Yes (b) No
(52) Does this facility have any system for the community to provide feedback on quality of services provided by the facility in your area?
(a) Suggestion Box
(b) Quality Assurance Surveys
(c) General Complaints Review
(d) Involvement of Community Representatives in Meetings
(e) Community Dialogue
(f) Other (Specify)……

(53) Were you allowed to give your opinion or lodge complain about the facility? (a) Yes (b) No

(54) In what one of the following do you take (a) Suggestion Box (b) Client Survey Form (c) Client Interview Form (d) Official Meetings with Community Leaders (e) Informal Discussion with Client or Community (f) Others ……

(55) Do you have any awareness programme on health matters in your area (a) Yes (b) No

(56) Who conducts the programme? ……

(57) Are you involved in the decision making process of the facilities in your area?

(i)	Decision Making	(a) Yes (b) No
(ii)	Planning	(a) Yes (b) No
(iii)	Implementation	(a) Yes (b) No
(iv)	Management	(a) Yes (b) No
(iv)	Finance	(a) Yes (b) No
(v)	Monitoring and Evaluation	(a) Yes (b) No
(vi)	Others Specify ……	

(58) What is the management structure?

(69) What is the mode of operation?

(60) What are the challenges?…….....
……
……
……..

(61) Give suggestion on how these problems could be solved…….....
……
……
……
……
……
……..

APPENDIX II

DEPARTMENT OF URBAN AND REGIONAL PLANNING
UNIERSITY OF IBADAN, IBADAN, OYO STATE

QUESTIONNAIRE FOR THE SERVICE PROVIDERS/OPERATORS OF HEALTH FACILITIES IN ONDO STATE (AKURE NORTH, OKITIPUPA AND AKOKO NORTH EAST)

Sir/Ma/Dr./Mr./Mrs., this questionnaire is designed to elicit information on the evaluation of planning and management of health care facilities in Ondo State (Rural Area). The research survey is mainly for academic purpose. In the light of this, every information given shall treated with strict confidentiality. Thank you.

SECTION A:
Health Facilities Characteristics

(1) Locational address ……
(2) Towns/Settlement where its located ……
(3) Name of Local Government Area
  (a) Akure North
  (b) Akoko Northeast
  (c) Okitipupa
(4) What type of health facilities do you operate?
  (a) Regional Hospital
  (b) General Hospital
  (c) Specialist Hospital
  (d) Health Hospital
  (e) Maternity Centre
  (f) Doctors' (Private) Clinic
  (g) Dispensary
  (h) Mobile Clinic
  (i) Others (Specify)

(5)Number and ownership of health facilities in the Local Government Area

S/No	Health facilities	Ownership						Total
		FG	SG	LG	Private	Voluntary	Others (Specify)	
	Type I: Health posts, health clinic, dispensaries							
	Type II: Primary health centre's							
	Type III:							

	Comprehensive health centre's, cottage hospitals							
	Specialized and teaching hospitals							

(6) Do you have any annex to the health facility within your local or outside of your area? (a) Yes (b) No

(7) If yes where is it located? (a) Within the town (b) outside the town

(8) Give the exact or approximate area occupied by the health facility?
- (a) 1 Residential plot 20m x 36m
- (b) Between 0.5 – 1 Hectare
- (c) Over 1 hectare

(9) How do you describe the facility in terms of location?
- (a) Grossly Inadequate
- (b) Inadequate
- (c) Adequate

(10) Do you have any space for future expansion? (a) Yes (b) No

(11) Do you have Planning, and Research Management Department in your hospital (a) Yes (b) No

(12) What is the capacity of your facility ……...

(13) What population does your facility serve…….

Availability of Infrastructural Facilities

(14) Describe the building used for the operational services of health services.
- (a) Specially designed building/complex for the purpose
- (b) Residential building (whole) converted
- (c) Part of residential building
- (d) Others Specify

(15) What is the source of power supply?
- (a) NEPA
- (b) Generator
- (c) Both
- (d) No power supply at all

(16) Is electricity (not including backup generator) regular?
- (a) very regular
- (b) just regular
- (c) not regular

(17) What is the most commonly used source of water for the facility?
- (a) Pipe-borne
- (b) Borehole
- (c) Water from unknown source
- (d) River or lake or pond
- (e) Well water

(18) What is the distance of the water outlet available to site the facility? (a) within site (b) 200m away (c)500m (d) above 500m

(19) What is the nature of the supply of water?
- (a) Regular
- (b) Seasonal

(20) How does this facility dispose of its hazardous waste ?
- (a) Burned in incinerator
- (b) Burned and buried
- (c) Burned and removed to offsite dump
- (d) Burned and not buried
- (e) Thrown into the trash/open pitor dump
- (f) Thrown into pit latrine

(21) How does facility/clinic/unit finally dispose of needles and other sharps?
- (a) Burned in incinerator
- (b) Burned and buried
- (c) Burned and removed to offsite dump
- (d) Burned and not buried
- (e) Thrown into the trash/open pit
- (f) Thrown into pit latrine

(22) Type of toilet facility available
- (a) Vip latrine
- (b) Water closet system
- (c) Pit latrine
- (d) Bucket latrine
- (e) Nearby bush

(23) Are they functioning (a) Yes (b) No

(24) Does the facility have functional telephone facility (a) Yes (b) no?

(25) Does the facility have a program for routine maintenance and repair of infrastructure? (a) Yes, onsite staff (b) Yes, outside support (c) Yes both inside and outside staff (d) No routine maintenance

(26) If Yes who is responsible for the maintenance ……

(27) Does the facility have a programme for routine preventive maintenance for major equipment? (a) Yes (b) No

(28) What is the commonest means of transport used by patients referred from other facilities to this facility with emergencies?
- (a) Private Vehicles
- (b) Bus
- (c) Hand Cart
- (d) Ambulance
- (e) Wheel Barrow
- (f) Bicycle
- (g) Others (Specify)……

(29) Does the facility have a functional ambulance/vehicle for emergency transportation of clients? (a) Yes (b) No

(30) Who makes transport arrangements for emergency evaluation of patients from this facility?
- (a) Facility Staff
- (b) Relatives
- (c) Both facility staff and relatives
- (d) Others (Specify)……

Characteristics of Personnel and Medical Facilities Available

(31) What is he mode of operation (a)day ( ) (b)market days ( ) (c)24hrs ( ) (d)village meeting days ( )

(32) Mode of Operation
- (a) Out-patient facility only
- (b) Both out- and in- patient facilities

(33) Does the facility have beds for overnight observation? (a) Yes (b) No

(34) If Yes, how many beds (a) less than 20(a) 20 (b) 30 (c) 60 (d) above 80

(35) Does the facility run routine outreach/mobile clinics? (a) Yes (b) No

(36) If Yes what services are offered:
- (a) Laboratory Testing/Diagnosis
- (b) Radiography Services
- (c) Physiotherapy Services
- (d) Readetrices
- (e) Theatre Operation Services
- (f) Dental Services
- (g) Pharmacy
- (h) Ambulance Service
- (i) Mortuary Facilities
- (j) Gynecology
- (k) Family Planning Services
- (l) Immunization Services
- (m) General Consultation
- (n) Others(specify)…….

(37) Tick different wards available in your health facility.
- (a) Children
- (b) Female
- (c) Male
- (d) Surgical
- (e) Antenatal
- (f) Intensive Care Unit
- (g) Others (list them)……..

(38) Supply the information regarding the numbers of beds available based on wards as tabulated below:

	Wards	**Number of Bed**
a.	Male	
B	Female	
c.	Children	
	Total	

(39) How many staff are on your pay roll?

	Category	**Number**
a.	Professional (General) Nurses	
b.	Professional Midwives	
c.	CHEW	
d.	Auxiliary (untrained) Nurses	
	Total	

(40) Other paramedical staff available (indicate).

	Category	**Number**
a.	Pharmacist	
b.	Medical Lab. Tech.	
c.	Radiographers	
d.	Physiotherapists	
e.	Health Records Officers	
	Total	

(41) Is there a permanent (resident) doctor working in the health facility? (a) Yes (b) No

(42) If Yes how many of them?
- (a) Less than 5 doctors

(b) 9 – 10 doctors
(c) 11 – 15 doctors
(d) 16 – 20 doctors
(e) Over 20 doctors

(43) If No to 35, is there any visiting medical doctor? (a) Yes (b) No

(44) If Yes to 35 how frequent is the visit?
(a) Daily
(b) Once a week
(c) Twice a week
(d) Four times in a week
(e) Only on request

Observations of the Operational activities of the Health Facilities

(45) How do you view operational modality of the health facility?
(a) Purely as profit-oriented ventures
(b) Humanitarian
(c) Cost of service subsidized by the government
(d) Others (indicate)

(46) What is the treatment success rate of patients in your area?
(a) Very low – one of 10 patients
(b) Low – 2 out of 10 patients
(c) Average – 5 out of 10 patients
(d) High – 7 out of 10 patients
(e) Very high – 9 out of 10 patients

(47) If very low or low, what is the factor/reason responsible for this?
(a) Rural patient condition is always too critical before coming
(b) Resistance to disease is very low
(c) Inability of patients to complete their treatment because of poor financial situations
(d) Drug effectiveness is very high
(e) High competence is demonstrated by workers
(f) Transportation problem
(g) Others (Specify)…….

(48) What are the common diseases among the dwellers in your area who patronizes your facility?
(a) Malaria
(b) Cough
(c) Cold
(d) Diarrhea
(e) Water Borne Disease
(f) Sexually Transmitted Disease
(g) Others (Specify) ……

(49) How can you describe the attitude of patients from rural areas in Ondo State towards medical treatment in your area?
(a) Adequate medical treatment as a result of quick recovery
(b) Complaints of medical bills being high
(c) Unable to purchase the drug prescribe
(d) Abandonment of medical treatment halfway because of cost
(e) Complaints of distance from their village to the location of tour establishment
(f) Others (Specify) ……

The planning of health facility

(50) Who is responsible for health facility planning
(a)The state government (b)LGAs (c)community (d) NGO (e) Induvidual

(51) How is it done?……..

(52) How can you describe the planning of these facilities with respect to the outcome of the patients treated?

(a) Good
(b) Very Good
(c) Bad
(d) Very Bad

(53)What are the problems encountered in the planning of the facility?

(a) Finance (b) logistics (b)human capital (c)others specify……..

(54) What are your suggestion to improving the planning of healthcare facility in your area?

(a) Awareness
(b) Through repair of roads
(c) Increase more transport and modes
(d) Increase the income level of the staff to encourage their stay
(e) Incentives be given more to the staff
(f) The available health facilities must be appropriately equipped and staffed
(g) Others (Specify) ……

(55) Suggest others things you could give to improve the health status of the people

……
……
……

The management of health facility

(56) Who is responsible for health facility management?

(a)The state government (b) LGAs (c) community (d) NGO (e) Individual

(57) How is it done?……..

(58) How can you describe the management of these facilities with respect to the outcome of the patients treated?

(a) Good
(b) Very Good
(c) Bad
(d) Very Bad

(59)What are the problems encountered in the management of the facility?

(a) Finance (b) logistics (b) human capital (c) others specify……..

(60) What are your suggestions to improving the management of healthcare facility in your area?

(a) Awareness
(b) Through repair of roads
(c) Increase more transport and modes
(d) Increase the income level of the staff to encourage their stay
(e) Incentives be given more to the staff
(f) The available health facilities must be appropriately equipped and staffed
(g) Partnership with the community in the management of the facility

Others (Specify) ……

(61) Suggest others things you could give to improve the health status of the people

……
……
……
……

APPENDIX III

DEPARTMENT OF URBAN AND REGIONAL PLANNING
UNIERSITY OF IBADAN, IBADAN, OYO STATE

RESEARCH TOPIC: PLANNING AND MANAGEMENT OF MODERN HEALTH CARE FACILITY IN THE RURAL AREA OF ONDO STATE, NIGERIA

QUESTIONNAIRE FOR THE MINISTRY OF HEALTH AKURE AND LOCAL GOVERNMENT COUNCIL IN AKURE NORTH, OKITIPUPA AND OSE LOCAL GOVERNMENT AREA OF ONDO STATE

Sir/Ma, Dr., Mrs., Mr., Chief,
The questionnaire is designed to elicit information related to health issues in the state/you're LGA. The purpose for this is to evaluate the planning and management of health care facilities in the rural area of Ondo State. The data so obtained will be used for academic purpose; therefore, any information given shall be treated with utmost confidentiality.

(1) Spatial distribution of health facilities in the state/LGA
   (a) List of existing health facilities and their locations (this can be supplied on a different page)
   (b) Total number of different categories of health facilities in Ondo State

	Type	Public (Govt. Owned) Nos.	Private Nos.	Other Nos.
1.	Specialist Hospitals			
2.	General Hospitals			
3.	Comprehensive Health Centres			
4.	Basic Health Centres			
5.	Maternity Centres			
6.	Dispensaries			
7.	Family Planning Unit			
8.	Health Post			
9.	Others			

(2)Health indicators for Ondo State

	Indicators	Ondo State	Ilaje LGA	Akure North LGA	Ose LGA

		2004	2005	2006	2007	2008	2004	2005	2006	2007	2008	2004	2005	2006	2007	2008	2004	2005	2006	2007	2008
1	Population per hospital																				
2	Population per dispensary																				
3	Population per maternity																				
4	Population per hospital bed																				
5	Population – medical doctor																				
6	Population – nursing staff																				
7	Nursing staff to medical doctor ratio																				
8	Infant mortality rate																				
9	Life expectancy at birth years																				
10	Maternal mortality (per 1000) live births																				
11	Children immunization																				

(3) Budgetary allocation to health sector state/LGA in the past 5 years.

	Budgetary Allocation				**Amount Disbursed**			
	State	Okitipupa	Akure North	Akure North	State	okitipupa	Akure North	Akoko North
2004								
2005								
2006								
2007								
2008								

(4) Do you generate funds in any of the following ways?

S/No.	**Description**	**Response**		**Comments**
		Yes	**No**	
1.	Fund Raising			
2.	Donations from Philanthropists			
3.	Industries			
4.	Community Groups			
5.	Co-operative Societies e.g. Provision of micro credit facilities			
6.	Other (Specify)			

(5) What are the sources of health care financing in your LGA?

S/No.	**Description**	**Response**		**Comments**
		Yes	**No**	
1.	Government Allocation			
2.	User Charges			
3.	Donor Contributions			
4.	Voluntary Organisations			

5.	Health Insurance			
6.	Loans			
7.	Others (specify)			

(6) Do you have a functional user charge policy in the State/ LGA? (a) Yes (b) No

(7) Do patients pay for the following services?

S/No.	Description	Response		Comments
		Yes	No	
1.	Card			
2.	Consultation			
3.	Investigation			
4.	Inpatient Care			
5.	Drugs			
6.	Antenatal Care			
7.	Family Planning			
8.	Immunization			

(8) Are there mechanisms for exemption of certain groups from payment? (a) Yes (b) No

(9) If Yes, which are these groups and how is this done……

(10) How much fund is committed annually to health facility in the last 5years?
2004……
2005……
2006……
2007……
2008……

(11) Does the mechanism exist for coordinating the activities of governmental, non-governmental and international agencies in the LGAs? (a) Yes (b) No

(12) If Yes, mention the mechanisms.

(13) Enumerate all sectors other than health that collaborate actively in planning and or implementation of LGA health programmes.
Sector ……..Project ……
Sector ……..Project ……
Sector ……..Project ……
Sector ……..Project ……

(14) Enumerate all NGOs contributing the same way and type of contribution

NGO …….	Project ……..	Financial ……..	Technical …….
NGO …….	Project ……..	Financial ……..	Technical …….
NGO …….	Project ……..	Financial ……..	Technical …….

(15) General Remarks/Comments/Observations

……
……
……
……

(16) What are the roles of NGOs/donor agencies in the heath planning and management in the state/LGA?.....

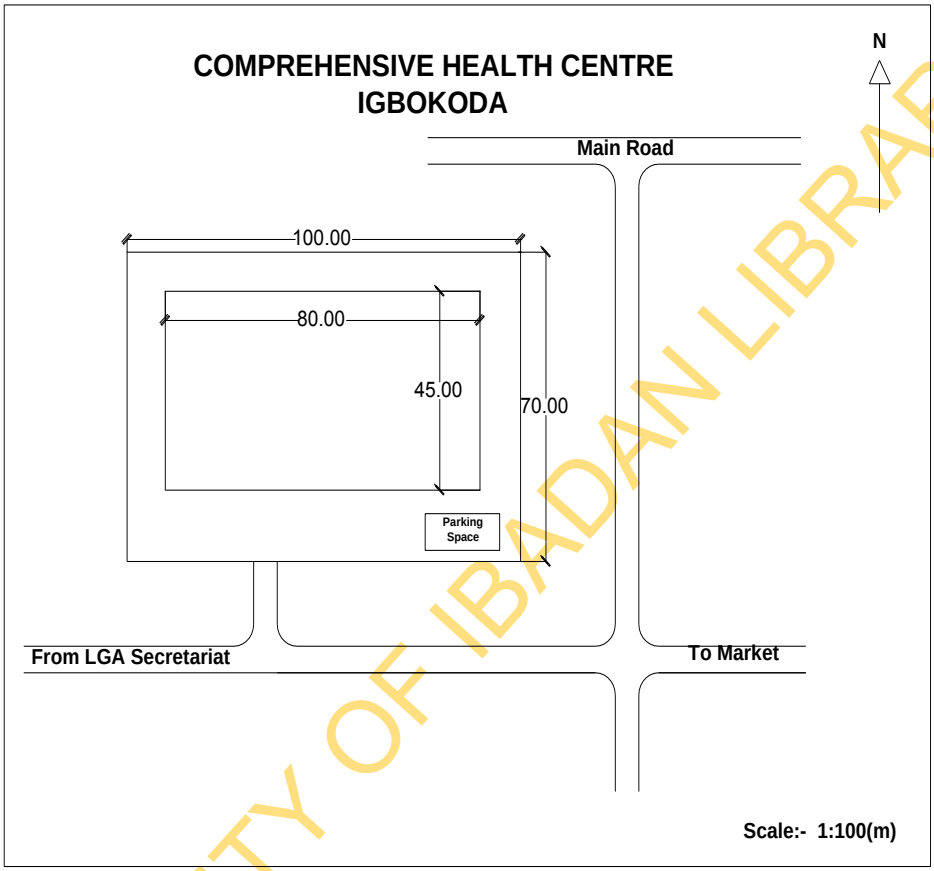
……
……

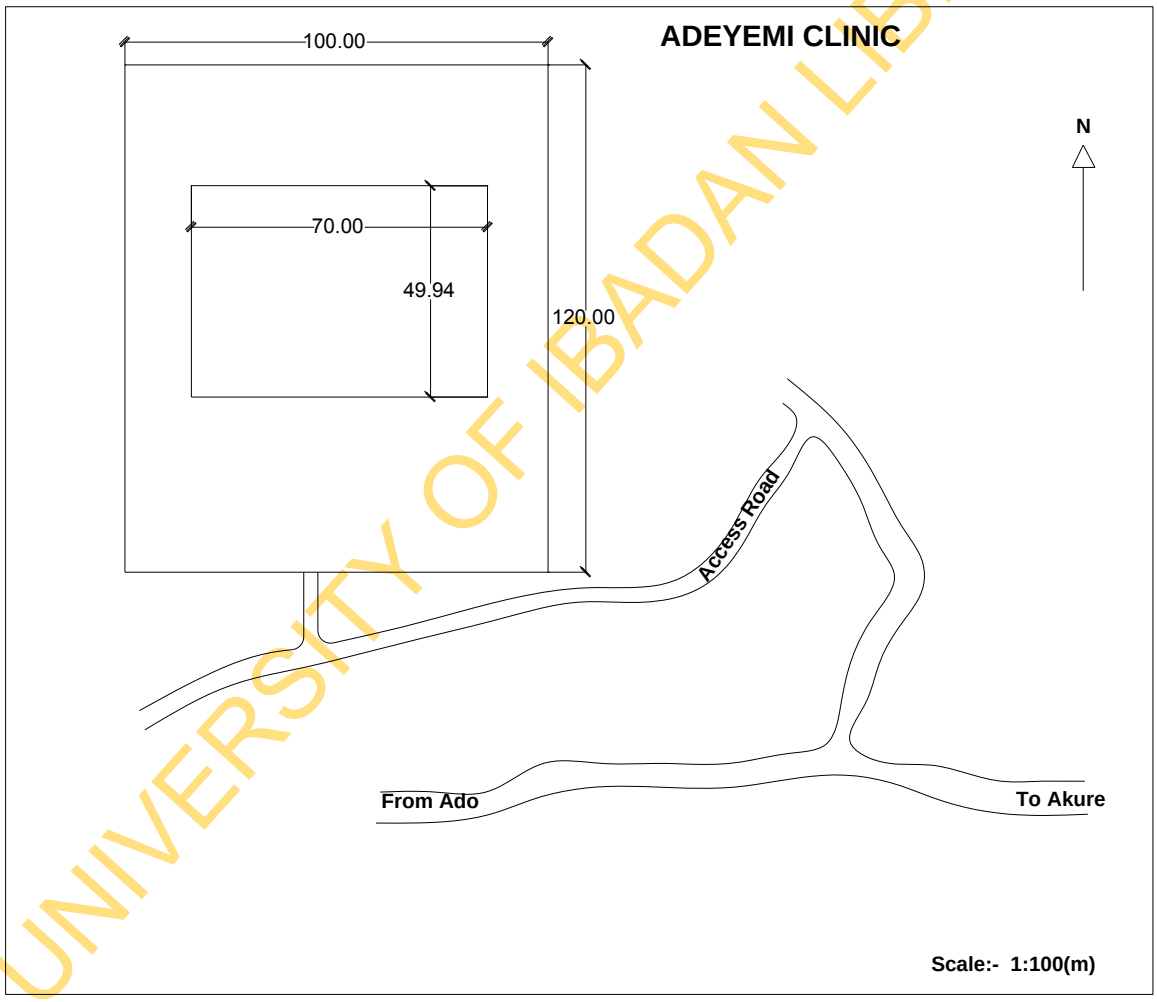
(17) How are the roles being coordinated?……...
……
……

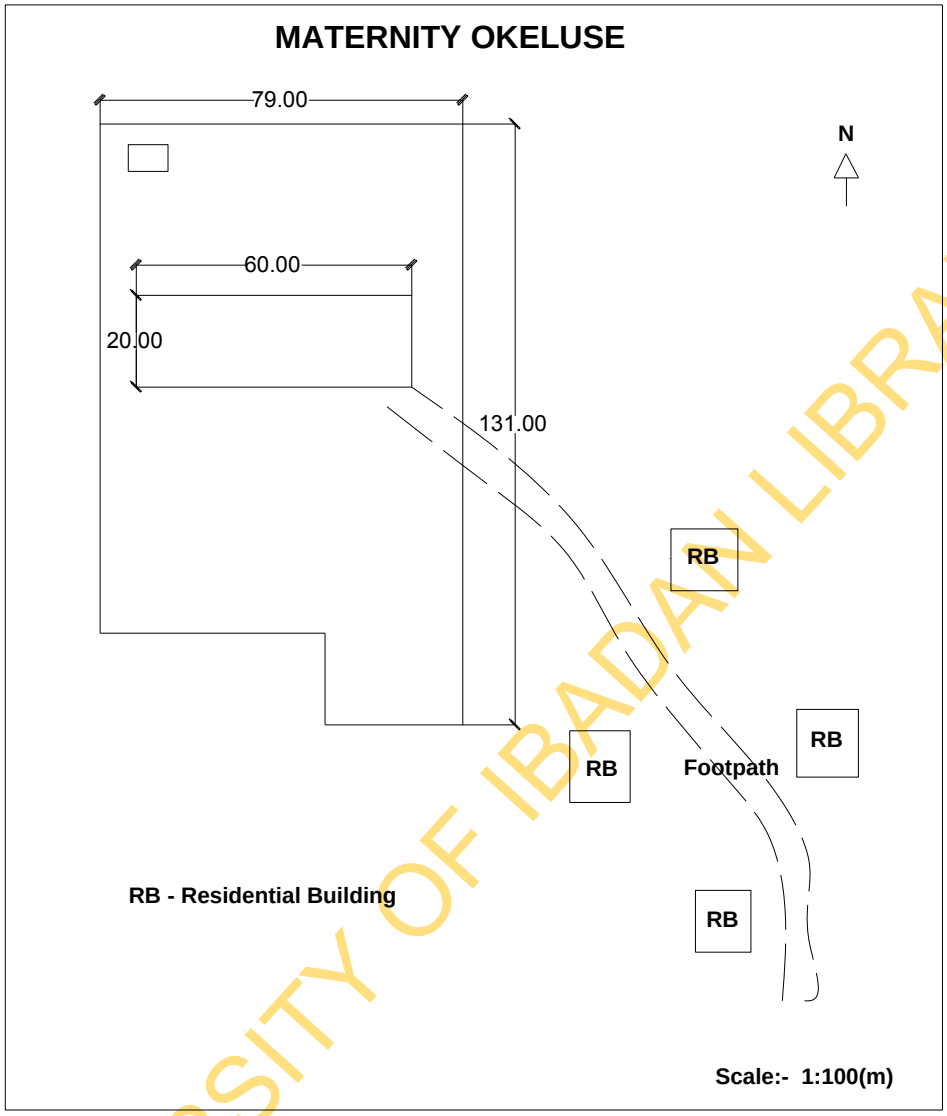
APENDIX IV

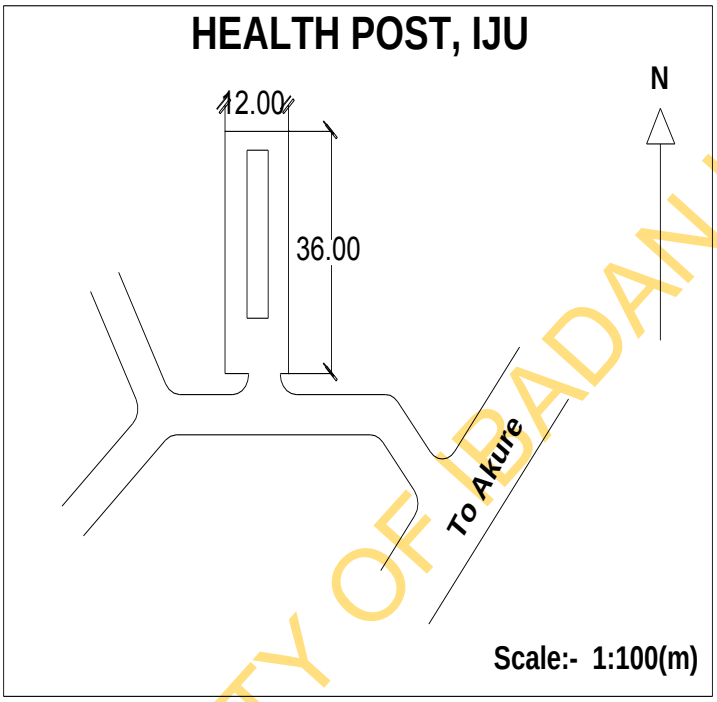
	Malaria	Water borne disease	Cough	sexually transmitted disease	Cold	Diarrhea/dysentery	Catarrh	Typhoid fever	Headache	Stomach pain	Guinea worm
	Exp(B)	Exp(B)	Exp(B)	Exp(B)	Exp(B)	Exp(B)	Exp(B)	Exp(B)	Exp(B)	Exp(B)	Exp(B)
location	1.4	1.308	0.635	0.819	0.609*	0.733	0.708	0.601	0.527**	0.698	0.41
finance	1.89***	0.687	0.711*	0.551	1.052	0.844	1.038	0.587**	0.877	0.726	0.469
siting	0.682*	1.189	1.308	1.606	1.284	0.756	0.79	1.221	1.1	0.971	2.097
distance	1.461*	2.347	2.102***	2.421	1.838***	1.567	1.603*	2.379***	1.761**	3.39***	7.239**
equipment	1.426*	0.667	1.202	0.984	1.108	0.71	1.202	0.67	1.042	0.767	4.712
drugs	0.784	4.892***	1.361	2.826*	1.465*	1.938**	1.22	1.807**	2.086***	2.222***	5.576
environment	0.851	0.423	1.213	0.379	1.324	0.941	0.721	0.852	1.296	1.024	1.792
emergency	1.131	1.298	0.763	1.494	0.794	0.992	0.711	1.715**	1.08	0.879	0.289
collaboration	1.349*	1.12	1.264	1.195	1.637**	2.022**	1.601**	1.277	1.287	1.462	0.041***
culture	1.022	0.555	1.79**	1.76	1.861***	4.312***	2.307***	1.89**	1.843**	1.813**	8.661*
personnel	0.289***	0.759	0.262***	0.32*	0.154***	0.196***	0.133***	0.31***	0.109***	0.187***	0.337
vdcparticipate	0.753	1.33	0.832	1.428	1.071	0.697	0.802	0.688	1.009	1.128	1.736
supervise	2.945***	0.808	2.466***	1.549	1.83***	1.856**	3.027***	2.805***	2.84***	2.933***	3.374
routinemeet	1.249	0.397	1.004	0.489	1.075	1.398	1	0.757	0.892	1.099	0.622
opinion	1.219	1.878	0.939	2.077	0.862	0.784	0.893	1.122	1.311	0.665*	0.369
suggbox	0.8	0.952	0.667*	0.291	0.958	0.72	1.001	0.485***	0.617**	0.683	1.216
Qualityass	4.131	0.000	2.354	0.000	2.189	6.985**	0.461	3.15	2.55	3.393	6.578
gencomplaint	2.796*	0.000	4.444***	1.967	1.33	3.028	2.607	5.13***	1.262	1.765	0.000
involvecomm	0.513***	0.654	0.86	0.315	0.473**	0.779	0.571	0.917	0.543*	0.788	2.916
commdial	1.524**	1.868	0.881	2.493	1.533*	1.549	1.273	1.213	1.547*	1.332	2.002
Constant	0.452***	0.023***	0.214***	0.015***	0.218***	0.061***	0.322***	0.164***	0.217***	0.147***	0.001***
						Diagnosis					
Wald (X^2											
Pseudo-P^2											
-2 Log likelihood	0.000(198.674)	0.205(24.914)	0.000(112.914)	0.275(23.282)	0.000(177.874)	0.000(109.655)	0.000(198.641)	0.000(89.872)	0.00(183.428)	0.000(131.795)	0.005(40.001)
Percent	0.245	0.122	0.177	0.140	0.250	0.221	0.292	0.158	0.265	0.23	0.371
correctly	1146.045(a)	200.994	819.442	156.616	887.678	529.395	769.140	702.164	826.006	641.664	71.779
classified	69.9	97.6	82.8	98.2	80.7	90.6	84.5	86.9	82.1	87.7	98.8

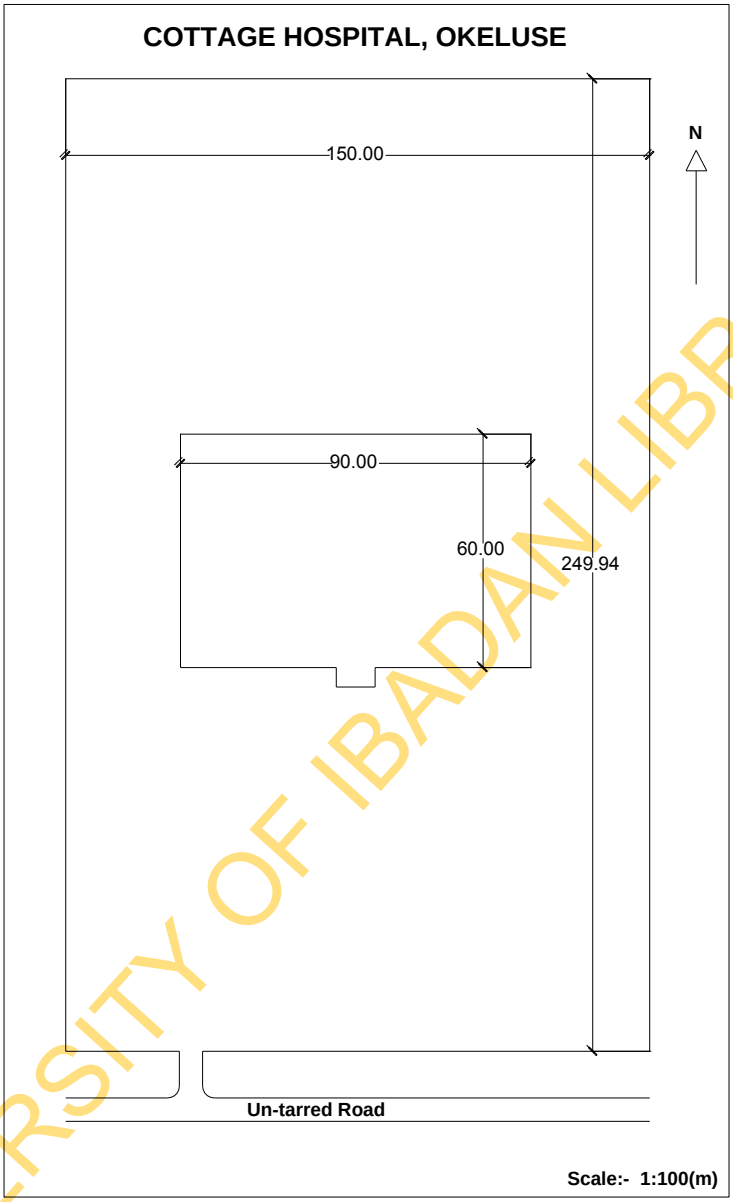
APPENDIX V



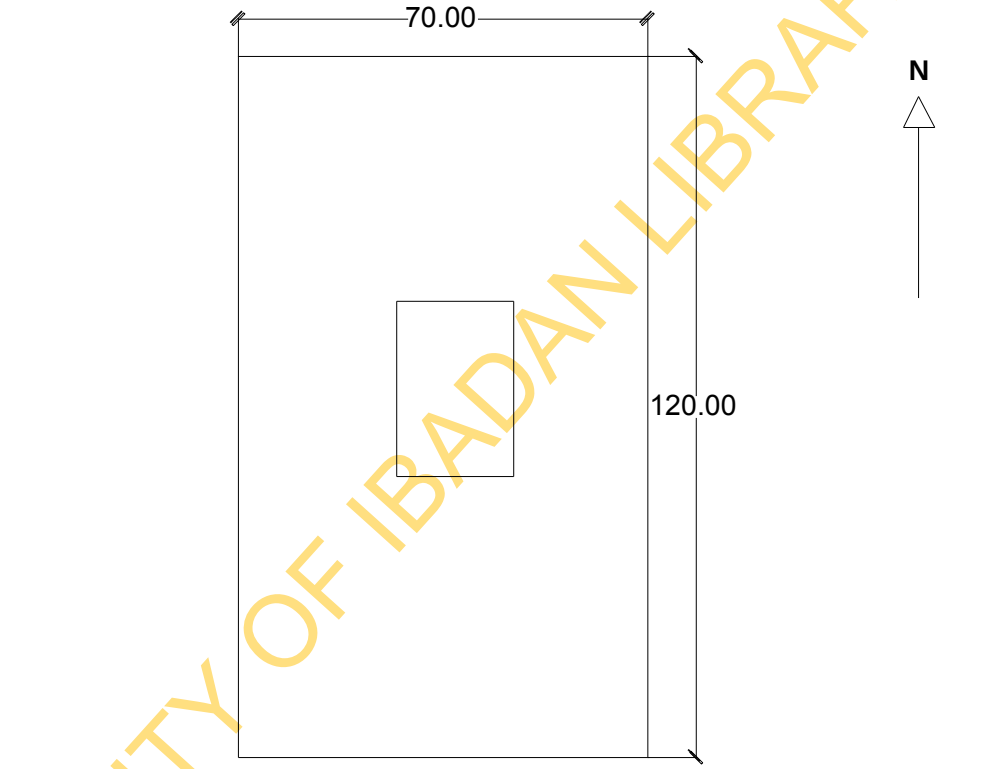








ADELABU CLINIC, OKELUSE



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